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Original Articles.

SECONDARY ABDOMINAL OPERATIONS.*

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More than a decade has elapsed since the late Mr. Greig Smith of Bristol fixed the surgeon's standard of attainments for abdominal and pelvic operations in these words: "To be prepared, at the appearance of any complication, to apply the best-known surgical technics; to do what is wanted, and no more than is wanted; to have the manner and method of each procedure mentally laid down in clear and definite lines; and generally to perform the operation in a steady, straightforward, workmanlike manner through the endless complications that may arise, is no trifling call on the capacities of a human being. Much of it may be learned by intelligent practice at the expense of the patients; much may be learned by careful study and practice on the dead body; but most of all will the young surgeon derive information from a close and intelligent personal attendance at the operations of our great masters. Abdominal surgery is no longer a field for legitimate and versatile experiment; certain fixed and useful laws and customs have been laid down by the dearly bought experience of great men; the abdominal surgeon ought to begin fully equipped with such knowledge as has been gathered for him."

Mr. Greig Smith was a conspicuous exponent of the Birmingham school of gynecology and abdominal surgery, and his teachings were those worked out and practiced by the master founder of modern abdominal surgery, Mr. Lawson Tait. Mr. Smith's book on abdominal surgery wielded a world-wide influence and molded the practice of abdominal surgeons in all civilized countries. It is the work of a student, a scholar and a practical surgeon of superior abilities; but the inspiration of its pathology, its surgical methods and technic emanated directly from the master at Birmingham. Our knowlege of intraperitoneal diseases and their complications has advanced wonderfully in these latter years, and our operative technic has greatly improved, but with all our increased resources the standard set up by Mr. Smith in the words I have quoted remains to invite the best efforts of surgeons doing abdominal and pelvic surgery. In the present discussion I shall endeavor to show that when we have disregarded this essential basis of operative work, and wandered away toward greater achievements by more devious methods, we have met with disappointment and have been compelled to retrace our steps. However methods may change, this standard of efficiency must ever be the basis of successful work.

With the lowered mortality resulting from the elimination of sepsis, with the perfect operative methods worked out by increased experience, more difficult operations are now undertaken and successfully completed than formerly. With the modern improved surgical technic, minor degrees of infection are less frequent, and surgical methods have been perfected to such a degree that not only has the mortality rate been diminished, but convalescence is unretarded for the most part by many complications and accidents that formerly obtained with marked frequency. In no one particular is the advance of recent years more marked than in the fewer incomplete operations than formerly obtained, and which contributed so much to an increased mortality both directly and by necessitating secondary operations. By secondary operations, I mean those required some months or years after an abdominal section for the relief of conditions not cured by the primary operation; or to repair results of the primary operation; or to relieve conditions which have arisen after the primary operation and which are pathologic in character, whether resulting directly or indirectly from the original pathologic condition.

The necessity for a secondary operation, often unavoidable in skilled hands, is to a certain extent a reproach to surgery and an annoyance, often an embarrassment, to the surgeon. This class of operations presents special and exceptional difficulties, and often, after the best efforts of skilled surgeons, terminates in disaster or failure. They compose a class quite apart and to themselves in the complications and difficulties presented, and deserve special consideration. *Pari passu* with the improvement in operative methods and skill, secondary operations have diminished; and it will better subserve my purpose in this discussion to direct attention to the means of preventing those sequelæ of operations which necessitate secondary intervention than to describe at length the operative technic of secondary operations. I shall endeavor to emphasize the special improvements in operative methods and the lessons born of experience which have done so much to perfect results and diminish the frequency of secondary operations, and which must of necessity constitute the working basis of prevention.

HERNIA.

The most common cause of postoperative ventral hernia is suppuration of the incision after abdominal section. Fifteen years ago it was estimated that quite 10 per cent. of cases of abdominal section were within three years followed by hernia at the site of the incision. With more thorough skin disinfection, with improved suture material for buried sutures, with more painstaking care of the operator's hands when exposed to septic materia',

* Read by invitation before the St. Louis Medical Society of Missouri.

with the use of sterilized rubber gloves by assistants and nurses, with more perfect hemostasis, with diminished insult to the tissues, and with greater care in adjusting sutures, suppuration of the abdominal incision has very greatly diminished. The perfection of operative technic along these lines must be regarded as the best means of preventing infection of the incised tissues.

The restricted use of drainage, and especially the substitution of the rubber-covered gauze wick for capillary drainage in place of the glass tube, has done much to lessen the frequency of hernia. In no particular feature of the technic of abdominal surgery has so marked and so universal a change taken place as in the use of drainage. In the early days the drainage-tube played an important and conspicuous part in all classes of abdominal operations. It was used in both clean and septic cases, and, while harmful in some ways, it undoubtedly "covered the retreat" after many incomplete and imperfect operations. Advancing knowledge and improved skill have discarded the tube and reduced the scope of drainage within certain defined limits. Drainage has an important place still in abdominal and pelvic surgery, but as now applied it is seldom the cause of hernia. In cases of suppurative appendicitis, where the open method of treatment is required, with multiple drains, hernia is yet of common occurrence.

The fixation of the pedicle in hysteromyomectomy at the lower angle of the parietal incision with the serre-nœud, after the method of Koeberlé, which was popularized by Keith and Tait, was followed more frequently by hernia in my work than any other procedure. The improved operation, in which the pedicle is dropped beneath the peritoneum and the parietal incision closed as in other sections, has done away with this prolific cause of postoperative hernia. While hernia after abdominal section is less frequent than formerly, it occurs sufficiently often to deserve careful consideration. When operation for this condition is done, omental and intestinal adhesions will offer the principal difficulties.

FISTULA.

This is perhaps the most serious and distressing of all the complications and sequelæ of suprapubic section and vaginal operations. Fistula may involve the bowel, bladder, or ureter. It may occur early after primary operation as the result of injury to coats of the viscus, or it may come on later as the result of ulcerative and necrotic changes.

Fecal fistula results, as a rule, from injury to the coats of the bowel during operation. In separating adhesions of the intestines in deep pelvic operations such injuries are common and should always be searched for and repaired. Fistula is common after operations for appendicitis when the cecum is gangrenous about the base of the appendix. Fecal fistula has been attributed to the pressure of a glass drainage-tube on the intestine; and while I can conceive of such injury by careless manipulation, I have never known it to occur in my own experience. Nature is very generous in dealing with intestinal fistulæ subsequent to abdominal operations, and they usually heal spontaneously. This is especially true of fistula appearing very soon after operation.

Urinary fistula is much less common as a sequel of abdominal operations than fecal fistula. In my entire experience I have had but one case of urinary fistula. While enucleating a densely adherent tumor from the pelvis I injured the left ureter unaware, and urine soon began to flow out of the drainage tract. I have repeatedly injured the bladder and repaired it at once, with invariable prompt healing. Unless the ureter is severed entirely, spontaneous healing and restoration of function is apt to occur, and accidental incision of the bladder resulting in fistula is also prone to spontaneous healing. When, however, either fecal or ureteral fistula persists and secondary operation becomes necessary, the difficulties presented will be such as to tax the highest operative skill. The prevention of these unfortunate complications of abdominal operations will be best facilitated by earlier operations in inflammatory conditions, greater care in protecting viscera from injury, and searching closely involved structures before closing the abdomen.

The adoption of the Trendelenburg position for difficult enucleation of neoplasms and inflammatory masses in the deep pelvis, by which the parts are exposed to the operator's eye, has done much to diminish these annoying sequelæ. Later I will allude to the unavoidable frequency of these complications in vaginal operations on the pelvic organs.

SINUS.

Among the sequelæ of abdominal operations is that of the infected ligature and accompanying sinus. It is both annoying and persistent. Appearing to close for a time only, to reopen and discharge again, to be hooked out by the surgeon, or the sinus opened up and the ligature removed. When a silk ligature is seated in septic tissues, as in the removal of pus tubes, infection is almost sure to occur. When very large and heavy ligatures of plaited silk are placed, the bulk of foreign substance may be so great that they will not be encysted, and abscess and sinus may follow. The use of the absorbable animal ligature will altogether prevent this annoying complication, and thereby do away with secondary operations for removal of the infected silk. The manufacturers have so improved the methods of disinfecting catgut that this substance is rapidly taking the place of silk for ligatures in all septic cases. Many operators use it with satisfaction exclusively for ligatures and sutures. It must be seated and tied with the utmost care, as it has not the secure fixation quality of silk.

SECONDARY SUPPURATING FOCI.

Secondary foci of pus are usually the result of incomplete operations in inflammatory conditions where adhesions divide the suppurative area into multiple pockets; or in suppurating cases wherein the drainage tract becomes obstructed by adhesions, leaving an infected area enclosed and without an outlet. Such conditions usually require secondary operation to open up the enclosed abscess cavity and afford free drainage. Such secondary foci formerly obtained frequently after incomplete operations for suppurative salpingitis and peritonitis, but have become less frequent with the improved methods of operation now commonly applied. Such complications are common after vaginal operations for suppurative salpingitis and peritonitis, often requiring secondary operation by abdominal section. Perhaps the most frequent site of multiple suppurative foci is about the *caput coli* in suppurative appendicitis. For this reason adhesions should be separated in all cases that will allow thorough work, and all suppurative foci drained. When secondary operation is indicated it should be done promptly, before the system is overwhelmed with septic products.

ADHESIONS.

A complete consideration of intraperitoneal adhesions after operation would supply material too extensive for the present occasion. In the early days, when drainage

was almost universal and extensive lavage with hot water was in daily use, together with elaborate sponging and mopping, adhesions were of more common occurrence and greater in extent than at the present time. Omental adhesions with traction in consequence on the stomach, intestinal adhesions causing pain and obstruction, are most distressing relics of otherwise successful operations. All abdominal surgeons of wide experience can recall the numerous and difficult secondary operations that were required to release the intestines from adhesions that made the patients' lives miserable. While these conditions were caused in great part by septic processes, there can be no doubt that in a large proportion of cases the injury to the epithelium of the peritoneum from excessive washing and mopping was the cause of adhesions. Nothing has done so much to lessen the frequency and extent of postoperative peritoneal adhesions as the modern practice of sequestrating the general peritoneum by broad layers of gauze, and limiting all traumatism of operation and peritoneal toilette to the immediate pathologic area. Another important means of protecting the peritoneum from adhesive inflammation, and, to my mind, one of the most important additions ever made to the operative technic, is the use of normal saline solution. It is easy for anyone to test for himself the common practice of ophthalmologists in using salt solution to apply to the conjunctiva in order to avoid the pain of plain water at any temperature. Salt solution has a special application to the peritoneum, and one of the most positive is its power to so attenuate septic material as to enable the peritoneum to dispose of it without injury to its own surface. Gauze packing for hemostasis and the Mikulicz method of draining deep peritoneal areas have had much to do with the causation of adhesions. Indeed, it is only recently that surgeons have appreciated the irritating and traumatic effects of placing gauze in the peritoneum. The application of these valuable additions to the operative technic will do much to prevent postoperative adhesions.

FOREIGN BODIES.

So much attention has been given to the importance of counting and marking gauze sponges and pads preparatory and during abdominal operations that accidents are far less common than formerly. Yet the leaving of a foreign body in the abdomen is one of the dangers of every extensive abdominal operation. Symptoms pointing to such accident during convalescence should be promptly recognized and the foreign body removed at once.

VAGINAL OPERATIONS.

Almost ten years have now elapsed since a profound impression was made on the profession in this country in favor of the methods practiced by the French school of surgery in the treatment of inflammatory diseases and neoplasms of the pelvic organs. The visits of Jacobs and Segond to this country, and their skill in vaginal hysterectomy as the initial step in dealing with pelvic suppurations, caused many to adopt the vaginal route as the best means of access to these structures. Vaginal section instead of suprapubic abdominal section was adopted by many in the treatment of almost every form of disease of the pelvic organs. Since it is impossible to deal with the diseased structures by sight and with appreciation of complications, by vaginal incision, many secondary operations were necessitated. Vaginal incision and drainage of tubo-ovarian abscess is a valuable procedure in septic patients, but it is only in a limited proportion that complete cure is effected by this means. Secondary operations by abdominal section is required in a great majority of cases in order to obtain a radical cure. These facts are becoming generally recognized. This class of secondary operations is among the most difficult known to surgery.

CONSERVATIVE OPERATIONS.

A consideration of secondary abdominal operations would be strikingly incomplete without giving proper attention to so-called conservative operations on the uterus, and especially the uterine appendages, as affording such a large class of cases requiring repeated operations. It is well known that in the early period of modern pelvic surgery ovaries and tubes were needlessly sacrificed in the enthusiasm of a new and brilliant surgical achievement. The reaction which came with this error of judgment was followed by the opposite extreme—the effort to remove only a part of diseased structures with the hope that the *vis medicatrix naturæ* would be equal to the repair and restoration of minor pathologic changes. Diseased ovaries were punctured or cauterized or resected and left *in situ;* infected tubes were loosened from adhesions, washed out with antiseptic solutions, and left in the abdomen with the expectation of restoration to normal structure and function. The application of this so-called principle of conservative surgery has necessitated more secondary operations than any other modern surgical innovation. So conservative and capable a surgeon as Dr. H. C. Coe of New York, in a recent article says, after alluding to a previous protest against the extreme application of so-called conservatism in pelvic surgery: "The views then expressed have been amply sustained by my later experience, including about 300 cases. I do not overstate when I say that in over 5 per cent. of these a secondary operation—abdominal or vaginal—has been necessary in order to relieve distressing symptoms, or to cure morbid conditions following the former operation. I have no doubt that this percentage would be higher if I could add cases operated on again by other surgeons." My own experience confirms this statement of Dr. Coe. No useful organ or structure should be needlessly sacrificed; structures infected and damaged beyond repair should be removed.

NEUROTIC CASES.

In this connection it may be well to mention that class of patients familiar to all doing extensive work in abdominal surgery, which may be designated the neurotic class. With persistent pelvic pain and dysmenorrhea they are usually introduced to surgical treatment with cervical dilation and uterine curettage. Again, they seek surgical treatment, and are pleased to have the appendages removed. Later they are apt to have hysterectomy. Always improved for a time by an operation, but never cured, they go their way. To operate in this class of neurotic patients, without demonstrable lesions, is a misapplication of surgery, and should not be done even for the so-called moral effect which, at best, is rarely more than a temporary impression.

The cultivation of ginseng is becoming a great industry in the United States. For a number of years the Agricultural Department of this country has, by circulars and otherwise, been urging the people to engage in the industry because of its large profits, until at the present time there are probably more than fifty growers in the country, and the industry has become quite a thriving one. This root is very hardy and grows in almost any climate. It is used extensively in China.—*Chicago Medical Recorder.*

PRURIGO (HEBRA) AS OBSERVED IN THE UNITED STATES.*

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The opinion is held by some that prurigo, as met with in Vienna, does not exist in this country. It is true that cases from time to time have been reported by Zeisler and others, who are familiar with the disease as it exists in Austria, and while there has been a *quasi* acceptance of these reports, yet they are looked on by many as unique. In England, previous to the International Dermatological Congress, which met in London in 1896, the prurigo of Hebra was unknown. At this congress cases were collected which it was thought corresponded in many ways to those observed in Vienna. These cases were examined by Kaposi and others, who confirmed the diagnosis of prurigo (Hebra), which established the fact that the disease was encountered in England, and to some of the American dermatologists present demonstrated that the prurigo as observed in the United States might likewise correspond to that observed in Vienna. The following cases may be of interest as typical examples of prurigo, as described by Hebra, which have come under my observation in Cleveland, and which correspond with cases seen in Austria, Germany and England:

CASE 1.—G. Z., male, 6 years of age, was first seen at the dispensary of Lakeside Hospital July 22, 1900. The mother stated that the child was born in Cleveland, although she and her husband were natives of Germany. There were four other children in the family older than the patient. The family history was good. No previous illnesses, excepting varicella and pertussis when two or three years of age. The mother stated that the child was born at term, was well developed and enjoyed good health until the present disease began, which occurred during the first year of life. It was noticed that the baby was more "itchy" than had been the case with the other children, and when less than a year old was noticed to indulge in vigorous scratching. As the child developed it was noticed that the oft-repeated scratchings gave rise to a papular eruption. This continued and became gradually more marked as the child grew older.

Examination.—When the case came under observation the child was normally developed and intelligent. It was somewhat pale; the lungs and heart were normal, temperature was 98.5, respiration 30 and pulse 90; the urine was normal. The eruption was most marked on the extensor surfaces of the thighs, on the legs, arms and forearms, and to a less extent on the trunk. The butttocks were likewise involved, and during the cold weather the mother stated that these regions gave more annoyance than during the summer. The lesions consisted of whitish papules, some of which had excoriated apices, while others were topped with desiccated blood crusts. Other lesions, again, were pale red. On slight friction the papules became more prominent and extremely itchy. In other places excoriations, which were evidently the result of scratching, were observed. A few small pustules were present, although this was not a conspicuous feature, and was doubtless the result of inoculation of pus organisms in the process of scratching. Over the regions most involved the skin was slightly thickened and of a darker hue than was met with elsewhere, and a few small cicatrices were observed. The skin furrows over the knees were markedly thickened. This was observed to a less extent on the tips of the elbows. The skin appeared to be unusually dry, although the mother stated that she had not observed that the perspiration was greater or less than that observed in her other children. On reviewing the case, the lower extremities were more severely involved than the upper. Further, there was a marked contrast between the parts involved and the skin of the femoral triangle and the popliteal space, as well as on the anterior surface of the elbow, which seemed to be unusually white and thin.

Treatment.—Tonics internally with cod-liver oil, and local applications to relieve the itching, were given. Some improvement was noticed during the summer, and the patient passed out of sight. In January, 1901, the patient returned for treatment, with a condition which might easily be mistaken for eczema, although the same regions were involved, and on close inspection the same papular characteristics were observed. Under soothing applications, which consisted of carbolized boric acid ointment, which later was replaced by an ointment containing carbolic acid and white precipitate, the case again made marked improvement, but at no time did it wholly subside. The case has been seen once or twice since; the irregular attendance is accounted for by the discouraging progress of the disease.

CASE 2.—R. R., female, aged 3 years, native of the United States, of English parentage, was seen for the first time Nov. 5, 1897. The patient has two brothers older and two younger than herself, in none of whom could a history of any cutaneous disease be found. Patient has always had good health, excepting that she has had varicella, rubeola and diphtheria. The mother stated that at the age of one and a half years the child complained of a very itchy skin, with the formation of small papules, which become excoriated with scratching and which never fully subsided. It was always better in the spring and summer months, but seemed aggravated by cold weather. The legs were the parts mainly involved. The extensor surfaces of the thighs and over the calves of the legs seemed to be especially selected, although the back and the extensor surface of the arms were likewise involved.

Examination.—When first seen the lesions consisted of pin-head-sized papules, some excoriated puncta, together with denuded areas, evidently the result of scratching, situated on a moderately thickened and slightly pigmented skin. In the popliteal space and the region of the groin the skin remained normal. On scratching, whitish papules which resembled urticaria appeared. These, the mother stated, had always been present to a greater or a less degree. This case was seen at very irregular intervals.

Treatment.—Local applications containing carbolic acid, salicylic acid and tar gave temporary relief, but at no time has the disease wholly disappeared. The opportunity of studying this case has been ample, and in my opinion the diagnosis of prurigo (Hebra) is warranted. The patient has appeared several times a year since, and no great change can be noticed excepting that the skin is somewhat thickened over the parts affected and is of a darker color. Year by year new cicatrices are added. Several methods of treatment have from time to time been resorted to. Internally, cod-liver oil, arsenic and iron, with the hope of increasing the general nutrition, has been followed, but without much apparent benefit. Local applications seem to give temporary relief, although at the same time the skin seems to become habituated to any local application if continued for a few months. On the whole, fatty substances have given more relief than aqueous solutions. As the normal secretions of the parts affected seemed to be diminished, liquid vaselin and carbolic acid ointment were selected and have given marked relief. Tar, resorcin and mercury have likewise been efficacious, although none of these measures seem to possess more than a temporary palliative effect. The disease is much worse in winter, although it does not wholly subside during the summer months.

CASE 3.—W. F. W., male, aged 9 years, was seen for the first time Oct. 8, 1902. The disease came at the age of 5 years, and has always been worse in the spring and winter. It was situated more or less over the whole body, although the extensor surfaces of the thighs and legs and the skin of the buttocks were more markedly affected.

Examination.—The lesions consist of whitish or pinkish papules, which become more prominent when scratched, together with small excoriated areas. The arms, and to a less

* Read at the Fifty-fifth Annual Session of the American Medical Association, in the Section on Cutaneous Medicine and Surgery, and approved for publication by the Executive Committee: Drs. H. W. Stelwagon, J. A. Fordyce and H. G. Anthony.

extent the forearms, were from time to time affected in the same way. The skin in the areas involved has become slightly pigmented and perceptibly thickened. There seems to be a lessened activity of both the oil and sweat glands in the parts affected. While the skin appeared to the writer to be unusually harsh and dry, the patient stated that he sweats excessively in the axillæ and about the neck and face.

Treatment.—Tonics were given, together with cod-liver oil, internally, and carbolic acid, resorcin and vaselin were applied locally.

In conclusion, I believe the disease is more common than is generally believed. The disease is often masked by excoriations from scratching, which, together with the pustules, give rise to a dermatitis readily mistaken for eczema. The disease should not be confounded with the prurigo hiemalis of Duhring, which is a very common affection in the Great Lake region in winter. In both diseases, however, there seems to be a diminution in the sebaceous and sudoriferous secretions. Both conditions are of uncertain duration, and may last a lifetime. In both, internal medication seems to have no effect, while in my experience liquid vaselin, to which may be added carbolic acid, is the most universally beneficial application used in the treatment of both forms of the disease.

DISCUSSION.

DR. EDMUND L. COCKS, New York City—I remember a case shown in London in 1898, and I was very much chagrined that our eastern colleagues had something we could not produce in America. I have a patient whom from the early age of one month had urticaria. The lesions were characteristic, would come and go in spite of any treatment. The child, now 9 years of age, is still under my observation and the urticarial lesions have developed into the characteristic lesions of prurigo. He was presented two years ago to the Manhattan Dermatological Society and two of the members who had studied in Vienna agreed in the diagnosis. It is a typical case, I am sure. The flexure of the arms and the popliteal spaces have been free from the first. He has never been nearer Austria than New York; his parents are of Irish descent. During the winter the prurigineous lesions are fully developed, admitting of no mistake as to their character, but in summer the lesions do not come out to the same extent unless he scratches; then, of course, we have the papules covered with small blood clots. Constitutional treatment has benefited him considerably and the pruritis has been relieved by a naphthol liniment.

DR. A. RAVOGLI, Cincinnati—I was surprised to hear the statement made in London in 1896 that in the United States prurigo was not known at all or was exceedingly rare, when every year, between my private practice, hospital practice and clinical practice, I was seeing 10 to 15 cases of prurigo of different degrees of severity. I have cases of prurigo which were called by Hebra prurigo mitis as well as prurigo ferox. I find that prurigineous eczema, which is so difficult to cure, is maintained in children between 2 and 3 years of age, by the presence of prurigo, and the eczema is nothing else than the aggravation of the prurigo on account of the continuous scratching and the condition of the skin.

DR. H. W. STELWAGON, Philadelphia—Philadelphia does not seem to furnish any cases of prurigo. I think a large number of us have been students in Vienna, and if there was one disease about which, on my return, I thought I knew something and was able to make a diagnosis, it was prurigo. I have been looking, however, for the last twenty years for an American case of this disease, and I can truly say I have failed to find one in my native city. There are cases of chronic eczema which may have a resemblance to extremely mild cases of prurigo, but certainly not the ones shown daily in Vienna, where the clinical picture is unique, something that can not be readily confounded with other diseases.

DR. LUDWIG WEISS, New York City—In my service at the German Polyclinic in New York we usually have several cases of prurigo; they are not extremely rare. They are better in summer, when the skin is soft and moist, than in winter, when the skin is dry; the itching is always more pronounced in winter. In making a diagnosis I always try to conform with the diagnostic symptoms which Hebra pronounced papules under the skin, slightly protruding, perceptible more by touch than sight, itching, scratching off the summits, followed by a slight bleeding from the papules, and some coagulated blood as scab adherent to the top of the lesions. We have seen this in every case where we have diagnosed prurigo, and have been extremely careful to exclude papular eczema. There may be some similarity to eczema, but we have never seen such pronounced inguinal dermatitis attending it as in prurigo. In the Manhattan Dermatological Society we have seen such cases repeatedly. In old cases of prurigo we can, as Hebra used to say, in consequence of the resulting induration and pigmentation, almost read the history of the patients by their skins. As to treatment: Being a disease which itches a great deal, we have seen iodin produce good results, but I like the old treatment, the so-called tar baths, better. Brush oil of cade on the skin, then put the patient in the bath for one hour. He then washes himself off with green soap, and after drying talcum powder is applied. The next day Vleminckx' solution is applied, after which the patient bathes. The lime contained in the lotion will precipitate out and is visible on the top of each scratched lesion as a white powder. This treatment is used for a few days, until the skin peels, then talcum powder with menthol is dusted on. Under such treatment the symptoms are mostly arrested.

DR. L. DUNCAN BULKLEY, New York City—I recognize the prurigo of Hebra, having known it very well in Vienna, as Dr. Stelwagon said; but in this country we find relatively few of these cases. I think there is a medium line, perhaps, between what Dr. Stelwagon and Dr. Weiss have said as to its frequency. It certainly does occur in New York. We are seeing cases at the New York Dermatological Society every winter, where a dozen of us agree as to the diagnosis. Within two or three months a boy of 11 or 12 years was exhibited who has had it since infancy. He presented as perfect a picture of the disease as I used to see under the elder Hebra in Vienna, and every one of us absolutely agreed as to his being a case of prurigo Hebra. He had enormous glands in his groin, and the flexures were entirely spared, behind the knees and at the elbows. On the other hand, I have had many cases shown me in the New York Skin and Cancer Hospital which some of my assistants have insisted were prurigo, but which were papular urticaria or other conditions. That prurigo of Hebra exists as an entity in New York I think every one of the dermatologic society members will verify. Although it is relatively rare, I may say in New York several cases each year.

DR. WILLIAM T. CORLETTE—The lymphatic glands, in my experience, are not particularly involved. I do sometimes find secondary infection with a general adenopathy. More commonly there is a slight enlargement of the lymphatic glands in the regions thus involved.

A FALSE OR CICATRICIAL KELOID.*

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CINCINNATI.

The name of keloid was given by Alibert[1] to neoplasms made up of connective tissue in the form of patches, strips or tuberosities, having identity with cicatricial tissue. One kind of keloids is developed spontaneously in the derma, with which the keloids are intrinsically connected, while others take their seat on the cicatricial tissue. After they have attained certain proportions they may remain without change indefinitely,

* Read at the Fifty-fifth Annual Session of the American Medical Association, in the Section on Cutaneous Medicine and Surgery, and approved for publication by the Executive Committee: Drs. H. W. Stelwagon, J. A. Fordyce and H. G. Anthony.

1. Alibert: Maladies de la Peau, Paris, 1810.

though in rare cases they may undergo involution and disappear.

Alibert himself divided the keloids into two varieties, one true or spontaneous, developed without perceptible injury of the skin, and another false or spurious, produced on cicatricial tissue as the result of a trauma, to which Kaposi[2] added a third one, the hypertrophic scar.

The difference between the two kinds of keloid was denied by Welander, Schütz[3] and other authors, but it must be maintained for the reason that between the two kinds there are differences of a clinical and histologic order.

We[4] have already had occasion to report a case of multiple spontaneous keloid, one of which had assumed such enormous proportions as nearly to surround the whole neck. In that case we were unable to find any previous wound or scar which could have been considered the starting point of the keloid. Moreover, in the

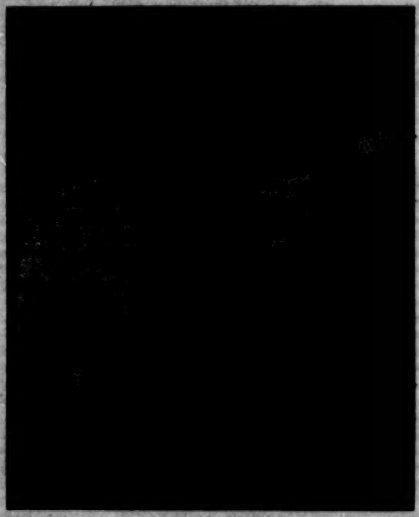

Fig. 1.—Cicatricial keloid.

same man there was a large scar on his forehead from a severe trauma, which was as smooth and regular as it could be. We agree, therefore, with Berliner[5] and Max Joseph[6] on the necessity of maintaining the difference of the keloids as true or spontaneous, and in false or of a cicatricial order. The spontaneous ones are tumors of obscure or at least unknown causation, developing in the depth of the skin, without any apparent previous scar, while the cicatricial keloids have their origin on the base of scars, which are the result of injuries of any kind, more often of cauterizations and burns.

2. Kaposi, M.: Lehrbuch der Hautkrankheiten.
3. Schütz, J.: Ein Fall von sogenannten, wahren Keloid combinirt mit Narbenkeloid. Arch. f. Derm. und Syph., vol. xxix, No. 1.
4. Ravogli, A.: Multiples Spontankeloid. Monatshefte f. prakt. Derm., vol. xxii, p. 624.
5. Berliner, C.: Ueber spontane und Narbenkeloid, Monatshefte f. prakt. Derm., vol. xxxiv, p. 321.
6. Joseph, Max: Ueber Keloide. Arch. f. Derm. und Syph., vol. xlix, Ref. Derm. Zeitschr., vol. vii, p. 201.

Both kinds of keloid, when they have attained a certain degree of development, remain unchanged for an indefinite time, show no tendency to involution, nor to any other degenerative process. They do not spread in metastatic forms, but when removed they are quickly reformed, assuming larger proportions. In the spontaneous keloid the relapse occurs in the form of a cicatricial keloid. In the cicatricial keloid, however, especially when produced on a burn, the relapse takes place with remarkable rapidity, but without any tendency to malignancy.

History.—The case to which I call your attention was in a colored man 38 years old, of an excellent physique, who had never suffered any disease, nor have we been able to detect signs of syphilis.

In an accident by fire he had his back badly burned, for which he did not have regular treatment, using only some vaselin to dress the wounds. The healing of the burned surface was slow, it having taken a few months to obtain complete cicatrization. As soon as the scar was formed a kind of tumor began to grow up, forming a hypertrophic growth, reaching the size and proportions shown in the illustration. While the cicatrix was taking on this hypertrophic development pain began to trouble the patient, which became much worse when the entire area was cicatrized.

Fig. 2.

Examination.—Present examination reveals several brownish-white areas on the ears, neck, hands and arms, which are the result of small burns. On his left forearm, on the flexion surface, is a superficial whitish scar, the result of the same burn, which covers a round area wider than a silver dollar. It contains in the center a group of five keloids, dark brown, shiny, elevated above the cicatrix, of the size of beans.

The most important lesions are on the neck and shoulders, where the burns had been most extensive (Fig. 1). On the back of the neck is a long keloid surrounding horizontally the inferior part of the neck, elevated for more than a half a centimeter above the regular cicatrix, darkly pigmented with round, thick edges. From there two elongated keloids five to six inches in length and three to four in width descend on the shoulders, intersecting both scapular regions. Dark brown in color, they have a polyhedral base seated on the scar, which, on the contrary, is thin, smooth, whitish and destitute of hair and pigment.

On the left side of the neck on a recent cicatrix is a group of keloids, five or six in number, the largest of the size of a cherry. Another keloid is seated under the left axilla on the lateral region of the chest. It is semilunar in shape, two inches in length and half an inch wide, dark brown in color, heavily pigmented, with round, thick edges, elevated above a thin and smooth scar.

The patient was suffering intense pains from the keloids on

V 4
190

the shoulders. The pains were sudden and spasmodic, jerking and contracting, so that they caused restlessness and the impossibility of sleeping.

A piece of keloid was removed for histologic examination, to which I will briefly refer. The body of the tumor is formed by hard fibers of collagenous tissue, arranged in a horizontal direction resembling waves (Fig. 2). In the cicatricial keloid the fibers result of a granular mass in opposition to the clean and neat fibers, which are found in the spontaneous keloid. In our cicatricial keloid the papillary layer shows no papillæ; it has been changed into a kind of granular connective tissue, in opposition to the spontaneous keloid, where the papillæ of the derma are well preserved, with little or no alterations. The stroma is made up of collagenous substance organized in thick connective bundles, entirely destitute of elastic fibers.

In our case of cicatricial keloid the epidermis appears to be much thicker and dense in the horny layer (Fig. 3). The Malpighi layer is also much thicker and is seen to be of large nucleated epidermic cells strongly pigmented and densely packed without any order. There are no epidermic projections, because there are no papillæ nor interpapillary spaces. The epidermic

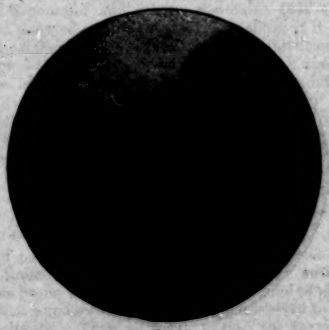

Fig. 3.

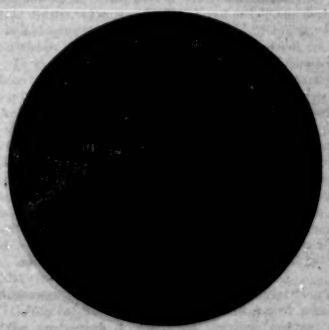

Fig. 4.

cells are large and thick and of the kind found in the stratum granulosum, directly implanted on the connective tissues forming the stroma of the cicatricial keloid.

The epidermis in general shows only traces of the openings of the follicles or of sweat glands, and they are plugged up with thick epidermis. The collagenous tissue which, in the form of thick bundles, forms the stroma of the tumor, is contained in sepiments which are the remnant of the cicatrix as shown by Max Joseph.[7] Between the sepiments in a horizontal direction lymphatic vessels and lymphatic spaces are very perceptible (Fig. 2, A), and on these are crowded thick concentric fibers of the connective tissue.

Some of these cells are greatly enlarged with large round nuclei (Fig. 4). The body of the cell is oval and is usually not well stained. These cells are in strict relation with the adventitia of the blood vessels, against which they are pressed and crowded.

Indeed, as is shown in Figure 5, the blood vessels are greatly increased in quantity, and can be followed in their ramifications in the whole structure of the tumor. They are, however, small and compressed in the midst of the mass of cells and of the thick connective bundles. The condition of the blood vessels varies somewhat according to the age of the keloid. In a recent keloid Crocker[8] found the blood vessels increased and dilated, surrounded by abundant cells. Unna[9] found that the branches or shears of a growing keloid contained enlarged blood vessels, running in a longitudinal direction, on which the bunches of collagenous fibers were densely crowded. The blood vessels are intimately connected with the growth of the keloid, which Unna considers to be a kind of perivascular tumor.

In old keloids (Fig. 6), however, the blood vessels, on account of the pressure of the cells and of the dense fibers, are compressed and reduced to strings, which can be scarcely recognized. In these tumors the cells can not be seen; they have been all changed into connective tissue fibers.

In our case, and with a larger power, elongated tumor cells are seen, and the nuclei so abundantly found in the structure of the keloid, appear to be corpuscles of the connective tissues, which have taken on an enormous development in number and size. The connective tissue corpuscles are more developed in the vicinity of the blood vessels. The specimens were stained with polychromatin, Unna Tanzer, and some, washed in 1 per cent. solution of carbonate of potassium and decolorized with glycerin ether mixture, Grübler. With ⅛ power they showed a layer of large violet cells, which resembled a great deal the Unna plasma cells. The presence of the plasma cells in the cicatricial keloid was also found by Jadassohn.[10] He has seen plasma cells in nearly all cases of a chronic inflammatory process, but he never has found the same cells in cases of acute inflammation.

One of the important features in the structure of the cicatricial keloid is the nearly total absence of the elastic fibers. We have tried to show their presence by staining with orcein and then hydrochloric acid, with osmic acid and tannin, but we have failed to do so. In fact, Schütz[11] is of the opinion that in the keloid the elastic fibers either are lost on account of the pressure of the

7. Joseph, Max: Ueber Keloide mit mikroscopischen Demonstrationen. Berliner derm. Gesellschaft, Jan. 16, 1900.

8. Crocker, H.: Die Anatomie des Keloids in einem früheren Stadium. Brit. Med. Jour., 1886, quoted by Unna.

9. Unna, P. G.: Die Histopathologie der Hautkrankheiten, 1894, p. 844.

10. Jadassohn: Archiv f. Derm. und Syphilis, Supplementary No. 1, 1892. Ref. Monatshefte für prakt. Derm., vol. xv, 1892, p. 79.

11. Schütz: Quoted by Max Joseph, Berliner derm. Gesellschaft, Ref. Derm. Zeitschr., 1899, p. 219.

connective tissues, or they are subject to peculiar chemical degenerations, and in consequence can not be stained. Joseph, with the use of stains of Unna for elastin and elacin which consist of wasserblau and saffranin, was unable to find the presence of the elacin, and concluded that the elastic fibers are entirely destroyed. In our specimens we can see a few thin elastic fibers toward the cicatricial tissues. The elastic fibers are of the greatest importance for the functions of the derma. H. Müller[13] was the first to recognize the relationship between the connective tissue fibers and the elastic fibers in the intercellular substance. Kuskow[14] after a while tried to prove that the elastic fibers in their development are in strict relation with the nuclei of the cells. Blaschko[15] had already described a fine superficial net of elastic fibers which is directly under the rete Malpighi. Unna[16] connected all those discoveries and stated that fascia, cutaneous muscles and subepithelial net are the three points of insertion for the whole system of the elastic fibers of the skin. The elastic fibers have important functions to perform; they maintain the skin in its normal position, and when the skin is stretched bring it back to its normal condition. The elastic fibers in the pars papillaris are much stronger; they form a peculiar network, from which fine elastic fibers, as proved by Unna, extend to the rete Malpighi. They maintain the papillæ in their normal order and bring them back when they have been disturbed.

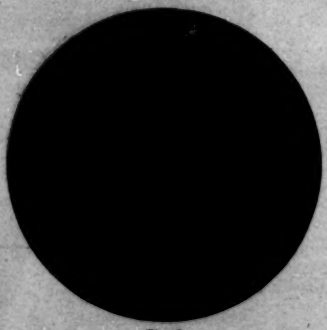

Fig. 5.

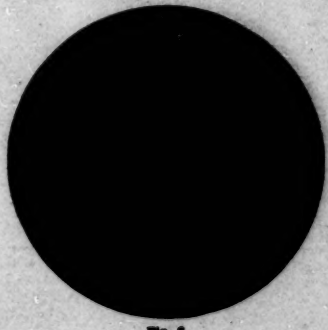

Fig. 6.

To all this we should add another function, which is to maintain the connective tissues in their normal position, and to limit their growth. In fact, Iwanow[16] has recently examined histologically the white atrophic cicatricial spots around the follicles of the skin in individuals suffering with acne. He has found that the alterations mostly consisted in the disappearance of the elastic fibers of the corium which normally surround the sebaceous glands and the hair follicles, as a result of the chronic inflammation of the glands. To this destruction of the elastic fibers he refers the frequency of the white spots and of the multiple keloids which have their origin in the acne cicatrix. With his observations he renders much more plausible the opinion of Goldman, that the white spots are the forerunners of the keloid, and that the keloid is the result of the disappearance of the elastic fibers.

According to our observations, we can say that the growth of the connective tissues is greatly increased by the loss of the elastic fibers. It seems that the office of these fibers is that of maintaining the connective tissues up to a certain degree of development. The elastic fibers, when destroyed, are never formed again.

In the structure of the keloid all traces of glands, hair follicles, cutaneous muscles are lacking.

ETIOLOGY.

From the above-referred observations it clearly appears that the destruction or the degeneration of the elastic fibers is the predisposing factor for the production of the keloid. As a determining cause, many have thought of a peculiar infectious pathogenic cause. Balzer and Leroy[17] showed a case of a large keloid of the presternal region of twelve years standing, which had its origin in a small wound made with a penknife. On the same occasion Darier expressed his opinion that the cause of the keloid ought to be found in a local infection. Hallopeau, however, found that the keloid was an affection of embryonal origin. The idea of a local infection in the keloid is also shown by Marice and Fournier,[18] who deny the special predisposition, maintaining, however, an inclination to keloids of the skin of the negroes.

Indeed, the statement of Unna, that all true keloids must have had their origin from a scratch or from a patch of seborrheic eczema, would tend to strengthen the possible infectious origin. Joseph referred to a case of a keloid developed on a small wound caused by a piece of glass. Ehlers[19] showed to the Danish Dermatological Society a boy six years old with five keloids, each one on a vaccination scar. An identical case of keloids developed on the cicatrix of the vaccination was shown by Besnier, and has been made in maulage, which is kept in the museum of the hospital, St. Louis.

L. Nielsen is of the opinion that keloid has its origin in a local infection, and relapses after its removal occur

12. Müller, H.: Bau der Molen. Verhand. d. phys. Med. Gesellsh. in Würzburg, 1860, x, p. 121; quoted by Ludwig Zentbeefer. Topographie des elastischen Gewebes. 1892, Derm. Studien von Dr. P. G. Unna.
13. Kuskow: Archiv. f. micr. Anat., xxx, 1887.
14. Blaschko: Monatshefte f. prakt. Derm., v, 1886.
15. Unna, P. G.: Monatshefte f. prakt. Derm., Supplementary No. 1, 1887.
16. Iwanow, W.: Russ. Jour. f. Haut und Ven. Krank., No. 4, 1903; Ref. Derm. Zeitsh., 1904, No. 2, p. 113.
17. Balzer and Leroy: Société de Derm. and Syphil., June 9, 1892; Ref. Derm. Zeitschr., vol. v, p. 824.
18. Fournier: Journal des Malad. Cut. et Syph., November, 1892, No. 11, p. 671.
19. Ehlers: Dan. Dermat. Gesellschaft, Sitz. May 8, 1890; Ref. Derm. Zeitschr., vol. vi, p. 925.

on account of a focus of infection remaining in the surrounding tissues.

Thiebierge[20] also favored the microbic origin of the keloid. The same views are entertained by Leredde,[21] who believes that in the acne pustules, which have given origin to the keloidal tumor, there were probably parasites capable of producing the hypertrophy of the tissues.

In our studies with the keloids we have never met with any form which suggested to us the idea of a microbic origin. We are rather inclined to maintain that the lack of the elastic fibers is of great enough importance to explain the abnormal development of the connective tissues. If the keloid is developed on a cicatrix, it is for the simple reason that in the cicatrix the elastic fibers have been destroyed, or have undergone degeneration.

TREATMENT.

Nearly every one who has removed keloids has had the disappointment of seeing, sooner or later, the relapse of the tumor. In consequence, the keloid has been referred to the class of those affections called by the ancients noli me tangere.

Leredde, however, on the authority of Darier, Tillaux, Sabourand and others, maintains that a keloid can be removed and relapse will not follow, if it is completely removed and healed up by first intention. But anyhow he advises not to take the chances if the keloid, in case of relapse, should produce more grave deformity.

In our case, on account of the locality and of the extension of the keloids, no surgical operation could find any indication. The patient was suffering excruciating pains, and so we have resorted to simple medication. A salve containing

R. Resorcin	3ss
Acid. salicyl.	gr. xx
Ol. olivæ q. s.	
Lanolin	3i

spread on muslin, was applied. This afforded for the first three weeks great relief, but after awhile the keloids began to get inflamed, the epidermis to excoriate and ooze some serum, so that it was necessary to discontinue its use. Then we began to dust the surface with boracic acid, 5 parts in 100 parts of starch powder. Under these applications the irritation subsided, the epidermis was formed again and the pains and the tenderness entirely disappeared. It seems that the keloids of the neck and shoulders had undergone a process of regressive metamorphosis, as they were reduced by more than one-third of their former size.

Dr. Evans, on taking charge of the service, began to treat the case with the x-rays, which were applied for a few minutes two or three times per week. The result has been rather satisfactory, the keloid tumors have become much harder to the touch, they have reached nearly the level of the skin, and the pains and the tenderness have entirely left.

DISCUSSION.

DR. W. S. GOTTHEIL, New York City—I agree with Dr. Ravogli's paper thoroughly save in one particular. I rather hold with those who believe that every case of keloid is cicatricial in its origin, and that there is no such thing as spontaneous keloid. The facts that the so-called idiopathic keloid occurs almost always on the back or sternum, where scars and similar lesions are frequent, or on the face, hands or arms, which are especially exposed to traumatisms, is a strong point in favor of this view. The very smallest lesion may be the starting point of a large, new growth. I have failed also to find any microscopic differences between the two varieties. It has been advised to treat keloid in the same way as a malignant new growth, and to make a wide excision. Good results have been claimed, but I have not seen any; all the cases that I have operated on have relapsed. Actinotherapy has given no results at all in my hands. On the whole, I do not think that we have made any progress in the treatment of the affection and I think that the best service that we can do for most of these patients is to persuade them to leave their keloids alone.

DR. D. W. MONTGOMERY, San Francisco—I had a case of spontaneous keloid in a negro. It was quite symmetrical on the shoulders, back and chest. I took out one of the keloids and found the papillæ obliterated, just as in true keloid. I instituted some treatment which did not do any good, but the microscopic picture was the same as in so-called true keloid.

DR. J. F. WALLIS, Philadelphia—Speaking of vaccination, when associated by the Bureau of Health of Philadelphia, I frequently noticed healing delayed in vaccination, sometimes for months, and instead of the natural cicatrix we would find a soft, jelly-like substance in the tissue remaining livid in color for a considerable time and often breaking down on the slightest pressure or irritation. These cases eventually recovered, but with the scar livid and prominent. I have wondered whether tuberculosis was responsible for this peculiar condition inasmuch as all cases gave a tubercular history.

DR. H. C. BAUM, Syracuse, N. Y.—I remember one early case, a large keloid growth occurring on the scar of lupus vulgaris. Hans von Hebra recommended thiosinamin injections for recent keloids. In this particular case a keloid had also developed on the back of the neck, where the patient had burned herself with a curling-iron and recovery was followed by a large olive-shaped keloidal tumor. Thiosinamin injections flattened down the old keloid on the lupus cicatrix, but did not remove them. It did remove the recent keloid, which rather confirmed Hans von Hebra's employment of it. I felt quite fortified then for handling keloid, for if the injections controlled recent keloids, they should prevent recurrence after removal. Another case came to me with a typical keloid over the sternum, which I excised, following that with thiosinamin injections, the value of which ought to be proven there. The result was that not only the original keloid returned, but a keloid tumor at the site of each puncture of the needle.

DR. MONTROSE A. MOSES, New York City—There is one point in the etiology of keloid that I have not heard mentioned, that is the production of keloid on previous lesions. I saw one case of keloid developed on the site of a maculopapular syphilitic eruption in a young woman. I do not think that the differences between the so-called true and false keloid are sufficiently marked to enable one to differentiate between the two from the histologic picture. In fact, I think that they are one and the same disease, only that in the "true" keloid the traumatism has not been evident. In regard to treatment, I have seen two cases benefited by the use of thiosinamin injections, and Pernet of London has suggested using a 15 per cent solution, but instead of dissolving it in alcohol, using a mixture of equal parts of glycerin and water. This gives less pain than an alcoholic solution.

DR. M. L. HEIDINGSFELD, Cincinnati—My histologic experience leads me to concur with Drs. Gottheil and Moses, that a differential diagnosis between false and true keloid can not be made. I am loath to believe that the disappearance of elastic fibers is of any etiologic significance. Their absence is due to pressure atrophy, the same as we find in many infiltrating forms of cutaneous new growths, and is an effect and not a cause. The mere absence of elastic fibers does not produce keloid, as is abundantly evidenced by lines of pregnancy, striæ atrophicæ and similar lesions, where there is a complete absence of elastic fibers, and the lesions are atrophic and distinctly depressed.

DR. A. RAVOGLI—Joseph first maintained that false and true keloid are the same thing, then later he found that it is a necessity for the pathology and for the treatment to maintain a difference between the two keloids. I find that in true keloids

20. Thiebierge, G.: Maladies de la Peau, Paris, 1896.
21. Leredde: Revue Pratique des Mal. Cutan. Syphil. and Vener., March, 1904, p. 77.

it is sometimes very difficult to find the first scar which has produced a keloid. However, when we see a keloid on a cicatrix we call it a cicatricial keloid, which, on account of the infiltration and of the running of the keloid, shows some differences in its histopathologic structure. I think the maintenance of a distinction between cicatricial and spontaneus keloid is interesting and useful for the pathology and for history of this disease. As to thiosinamin, I note that Hebra used it a great deal, but at present it has been nearly abandoned. Recently Peré resorted to interstitial injections of 5 per cent. solution of creosotal in order to produce reabsorption of the tumor, but the results have been rather poor, and instead of seeing a diminution of the keloid they have seen it take larger proportions. I can not state what the relation is between tuberculosis and keloid. In the cases I have had occasion to observe I have found the patients in good physical condition, with no signs of tuberculosis. It may be that some cases have shown tuberculosis, but I think that is more of a coincidence than anything to do with the existence of a keloid. So I can say also with syphilis. I see a great deal of syphilis, but very rarely have I seen a case of keloid come on a syphilitic lesion. In regard to the elastic fibers, I believe they are lost only in those affections where we have a great deal of hypertrophy of the collagenous tissues, for instance, we often find in fibroma of the skin that very little elastic fibers remain. I believe the lack of elastic fibers is the secret of the formation of the keloid.

A COMPARISON OF PHOTOTHERAPY, RADIOTHERAPY AND HIGH-FREQUENCY THERAPY IN SKIN DISEASES.*

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NEW YORK CITY.

Unlike the lawyer who, in the preparation of his brief, has his precedents behind him, the physician who attempts to write on treatment by light and rays and the newer electrical currents of the day has most of his precedents ahead of him. What to-morrow can bring forth no man may know. What the near past has revealed to us is sufficient to cause us to pause in wonderment and admiration. Were not my task sufficiently arduous in attempting to compare methods between which there often seems to be so little comparison, I would gladly dwell on the marvelous things which each method has accomplished in its own peculiar sphere. What the Röntgen ray is capable of in a therapeutic way takes it out of the realm of doubtful test. It can no longer be said to be an unknown quantity. Since, too, the position of the ray in the spectrum has been pretty well determined, its original designation, modestly given, should be dropped. The quantity of its position and power is no longer unknown. Let us consider it as the Röntgen ray.

Each of the three modes of treatment mentioned in the title has its own peculiar field of utility. Each has its more or less distinct limitations, and each is susceptible of enhancing the value of the other when judiciously combined, or employed in succession. The statement so often made that in light treatment we are dealing with a known quantity, while with the ray we have an unknown quantity of uncertain action, is not so forcible an argument as it was a short while ago. With the advances in ways of measuring the dose, the dangers of undesired deep effects and sloughing from Röntgen rays have been practically done away with.

It may be said that in each separate application of the light treatment a "burn" results. By this term we mean the pronounced reaction without which little therapeutic result is secured. With the ray serious skin lesions can be destroyed without the slightest redness from the ray ever showing on the skin. In destroying neoplastic growths by means of the high-frequency spark a reaction occurs, too, if prompt and pronounced results are anticipated. It is, perhaps, as much entitled to the designation "burn" as is the ray effect of similar degree, though naturally much more circumscribed as a rule. In a general way, it may be said that arc-light therapy is limited to a few skin diseases, and that for certain countries where lupus is not common the limitations are very restricted. If my opinion should be based on my personal experience alone, I should unhesitatingly say that the ray would accomplish for lupus all that the light would, and this, too, more expeditiously.

It must be remembered that nowhere outside of Copenhagen, and perhaps London and a few other places, is the method carried out in all its details in a way to warrant anyone drawing comparisons. Nor must the results obtained from small modifications of the original apparatus be taken as a basis of judgment.

The ray is capable of intensifying the actinic reaction, and the high-frequency current hastens the *restitutio ad integrum* when the ray has produced too severe reaction.

On mucous membranes the ray has a decided advantage over the light.

COMPARISON OF THE TWO METHODS.

In making a study of the relative merits of radiotherapy and phototherapy it seems at the present time necessary to consider only a few diseases as they are influenced by the Röntgen ray and by the actinic rays, as applied by Finsen and his followers.

First, we must appreciate the wider range of usefulness of the Röntgen ray, which is not restricted wholly to surface influence, as seems to be the case with the ultraviolet light. To be sure, the results have so far not been brilliant in many internal or deep-seated affections, but that the *x*-ray produces a pronounced action on deeper tissues can not be doubted.

In the treatment of lupus much stands in the way of definite conclusion at the present time concerning the relative merits of *x*-ray and actinic light. There is the personal equation, with individual preference, greater experience and greater skill with the one than with the other. Phototherapy has been perhaps more profoundly studied, and more cases have been treated to a point of cure.

That the Röntgen ray has a great influence on lupus tissue there can be no doubt. Many have been cured. The proportion of failures, so far, has been greater than in the other method. We must remember, however, that the greatest success has been achieved by the originator in Copenhagen. If we compare lupus treated by the two methods the world over, the difference in end-results is not so marked.

The chemical light penetrates deeply, homogeneously, and pains less; herein lies its advantages over older methods, granting that end-results are equal. In point of time, this method has the advantage over the older when we calculate the period over which the others, exclusive of ablation, must extend.

A careful computation of statistics points to phototherapy as the method offering the largest percentage of actual cures.

The advantages of the *x*-ray as compared with the actinic method in the treatment of lupus are that (1)

* Read at the Fifty-fifth Annual Session of the American Medical Association, in the Section on Cutaneous Medicine and Surgery, and approved for publication by the Executive Committee: Drs. H. W. Stelwagon, J. A. Fordyce and H. G. Anthony.

V 43
1904

we can treat larger areas; (2) it is much more effective in ulcerating lesions; (3) we can treat lesions of the mucous membranes; (4) the treatment is much shorter in duration.

The *x*-ray is more uncertain; the dosage is not so well established or controlled; the limitations are not so well mapped out, and harm can more readily be done.

Reports, although numerous, represent too large a proportion of cases which have "improved." Naturally, we can consider only those discharged or reported by competent observers as clinically cured. In this country, at least, where lupus is rare, and presumably in others as well, statistics must be based on the competency of the observer from the diagnostic side. Reports have been made of lupus treated by these methods which were not lupus at all, but syphilis or something else.

There is one feature of radiotherapy to make it of decided advantage, and that is entire absence of pain or discomfort, and the much-restricted number of applications required.

Among other advantages of the Finsen method are that it is not very dangerous to the operator, while the *x*-ray has been known to produce serious results. While the actinic is the more tedious treatment, it has the advantage that it can be carried out by trained or semi-skilled persons—nurses, etc. This is not so practical with the *x*-ray, which should be under the direct supervision of the physician.

In epithelioma, curettage should be employed coincidentally with either of these methods.

The actinic ray reaction is apt to come on, if at all, in from four to five hours, and the resulting slight dermatitis, resembling that produced by the sun's rays, is usually readily controlled by some simple application.

The dermatitis following the *x*-ray comes on only after some days, or even weeks, and the extent and ultimate results are very uncertain. The reaction, when severe, is not controlled by ordinary methods of treatment.

The actinic treatment is less likely to produce burn than the *x*-rays.

The resulting cicatrix after phototherapy is softer, whiter, and generally better, as a rule, though most excellent scars often follow radiotherapy.

The effect of the chemical rays is very irritating on the conjunctiva and the retina, while the *x*-rays exert very little effect.

The use of amber-colored and red-colored glasses and the use of dark red shades at the windows will lessen the irritation in case of inflamed eyes. Blue glasses, however dark, are found unsuccessful.

Leredde and Pautrier[1] make a comparison of the results obtained by phototherapy in lupus vulgaris and lupus erythematosus with those following other methods of treatment. They conclude that phototherapy is the one method which gives the best results in tuberculous lupus, giving deepest action, although radiotherapy may in the future be found just as useful. While a cure can not always be promised, the number of failures is small. In lupus erythematosus this method of treatment is superior to all others, although the results are much less constant than in tuberculous lupus. It is necessary to produce complete sclerosis, and the phototherapy should be continued until a cicatrix is formed. The indications and contraindications for the employment of this method of treatment are as follows: It is indicated in every case of tuberculous lupus which has resisted other methods of treatment. The results are uncertain in cases with much thickening of the tissues and in those in which a deep sclerosis has been produced by other treatment. In vegetating lupus the volume of the tissues should first be reduced by scarification or caustics. In elephantiasic lupus this method of treatment generally fails. It is contraindicated in recent lupus, which can be cured by ablation with union by first intention; and in lupus of the trunk and extremities, which can be cured more rapidly by other methods. In tuberculosis of the extremities it is likewise inapplicable because the hyperkeratosis and acanthosis prevent the penetration of the chemical rays. In lupus erythematosus it is contraindicated in the superficial wandering forms curable by other methods. It can be applied only in those cases in which the disease reappears in the same places, and in which other methods have failed. In the fixed forms, with or without a tendency to atrophic regression, it may be employed after the failure of other remedies. Every case ought to be treated energetically from the beginning, since the longer it lasts the deeper and more rebellious it becomes. In those cases which have resisted phototherapy, properly carried out, radiotherapy or radioactinic therapy may be tried.

In skin diseases in general the field of usefulness for *x*-rays is much broader than for Finsen's method. Here the lesions must be few and localized, while the ray can be so applied as to take in extensive surfaces, or the entire body, as in mycosis fungoides.

LUPUS.

In two cases of lupus with marked ulceration treated by Morris,[2] Finsen's method was found useless, but in both the ulcers healed rapidly under *x*-rays. When the mucous membranes are involved the *x*-ray gives good results. That of the nose is attacked with difficulty by the ultraviolet rays, but very easily with the *x*-rays. Many cases of lupus under treatment by either method improve up to a certain point, but stop short of a complete cure, so that whichever is used it must be supplemented by some of the older methods.

Scholtz, who has had a very extensive experience, covering a number of years, with the *x*-rays in all varieties of lupus, in his report of 55 cases claims to have brought about a complete cure in the majority in a very few months, with very satisfactory cosmetic effects. This seems to compare very favorably with the actinic method, which requires a much longer time, with much more inconvenience to the patient as regards the comparative length and frequency of exposures.

Freund says much the same length of time is required in the two methods; the resulting scar is equally good. He advises raying large surfaces and applying actinotherapy to remaining foci.

Heidingsfeld[3] speaks of three cases in which the ray had failed, but under the London Hospital or Sequeira lamp the nodules disappeared.

Harrison and Wills[4] found that, while two out of three lupus erythematosus patients improved under actinotherapy, they made more rapid progress under the *x*-rays.

Sequeira, of the London Hospital, believes from a trial of both methods that the actinic gave better results. Out of 154 cases treated by the latter, 42 were successful.

Leredde and Pautrier report on 40 cases. Of these, 37

1. Annales de Dermat. et de Syph., 1902, No. 2.

2. Practitioner, April, 1902.

3. Cincinnati Lancet-Clinic, 1902, vol. lxxxix.

4. Bristol Medico-Chirurgical Journal, 1902, vol. xxi.

remained under treatment sufficiently long for conclusions to be drawn; 8 were cured, 7 nearly cured, in 10 definite areas were cured, and final cure was seemingly sure from actinotherapy.

At first it was believed that the beneficial action of the chemical light in lupus was mainly due to the direct destruction of the tubercle bacilli by this light, and that the light reaction was only of minor consideration.

But careful investigation seems to show that the destruction of the tubercle bacilli is mainly due to the reactive inflammation of the tissues, the increased blood flow, or to the eventual chemical changes taking place, and not to the direct action of the light.

Nagelschmidt believes that the destruction or weakening of the tubercle bacilli through the direct action of light is the first result, and that only after this is accomplished the light reaction becomes an issue by facilitating absorption and assisting in the regeneration of the tissues.

For the most successful results it is necessary that the patch should be dry, and the lens be pressed hard against it.

If, by the use of the *x*-rays or with the aid of applications of various medicines, an ulcerating lupus can be dried up, then treatment can be continued with the actinic light.

From November, 1895, to January, 1902 (seven years), 804 cases were treated in the Finsen Institute; 412 were cured, of which number 124 showed no recurrence in from two to six years, and of which 288 had been free from recurrence for a period of less than two years. Of the remainder, 192 were nearly cured and 117 remained under treatment. In 67 the treatment was interrupted by death, illness or other cause, leaving 737 for study. Of these the result was favorable in 695, unfavorable in 42, or 6 per cent., against 94 per cent. of good results. At the St. Louis Hospital in Paris Gastou-Baudouin and Chatin[5] report 30 cases, with 7 failures, 12 partial cures and 11 complete cures. Leredde and Pautrier[6] give 43 cases, 8 of which were cured, 7 almost cured, with 28 still under treatment. In a recent visit to Paris I had the privilege of seeing the work being done by Gastou and Leredde, among others. At the Broca Hospital I found my friend Professor Brocq operating by the well-known methods of ante-Finsen days on a number of lupus patients in whom the light had been successful up to a certain point, but beyond which it seemed incapable of producing further benefit.

Such instances illustrate the point on which I have previously dwelt in former publications, that these methods are not to be relied on exclusively, but must often be fortified by other measures.

Malcolm Morris reports on 65 cases, 11 of which were cured, no relapse taking place in from six months to two years. In 15 cases slight remnants have remained or relapses have occurred; 15 are still under treatment. All patients remaining sufficiently long under treatment were improved.

Forchhammer found that out of 456 patients treated, 130 showed no recurrence during an observation of from one to five years. These are undoubtedly included in the larger statistics of Finsen.

Harrison and Wills report on 42 cases being treated by the Lortet-Genoud lamp. Almost all were improving at the time of report.

In the London Hospital 396 patients have been treated, with 149 discharged as cured, up to 1903.

5. Annales de Dermat. et de Syph., April, 1902.
6. Phototherapie, Paris, 1903.

At the St. Louis Hospital in Paris, up to May, 1903, when I visited the laboratory of Professor Gastou, 250 patients had been treated, and about 100 were reported as cured.

In lupus erythematosus the *x*-ray gives at least as good results as phototherapy. Compared with high frequency and radium therapy, too few data are available, but excellent reports have been made on the high frequency.

As between phototherapy and radiotherapy, on the one hand, and older methods (application of iodin, pyrogallol, caustic potash, strong carbolic acid, chlorid of zinc, scarification, galvanocautery), on the other, the newer methods have the decided advantage.

ALOPECIA AREATA.

Here the time element must not be ignored in forming final conclusions. The well-known tendency for many patients to make spontaneous recovery should not confuse the observation.

When a recent case responds promptly to chemical light we may credit the method with the result.

The conditions of control have been complied with in a number of instances, including Finsen's own cases (49, with 30 cures). Sabouraud believes, and we must lean to his way of thinking, that the irritation produces the equivalent of that we aim at in our older methods. In my own practice I have experienced little difficulty in the non-universal cases in securing renewed hair growth within comparatively short time-limits with pure carbolic applications at long intervals (three or four treatments in six or eight weeks). This is surely much simpler, more time-saving and inexpensive.

Localized chronic plaques which resist this and similar measures will sometimes give way under chemical light or *x*-raying. Comparing the latter, it would seem that more patients have so far recovered under radiotherapy.

EPITHELIOMA.

Here the *x*-ray is unquestionably superior, though the arc lamp will cure lesions of the cancroid and rodent-ulcer type.

When we compare the number of patients treated for lupus by actinotherapy with those treated for epithelioma, the reports so far available seem insignificant as compared with those reported on from radiotherapy.

Among the reported results are Forchhammer's 24 cases from the Finsen Institute, with 11 cures; Sequeira's 3 successful cases; Burgdorff's 8 cases, with 3 reported cured and 4 improved. My personal experience with exclusive actinotherapy in cancer has been slight. In several instances actinic rays have been tried for a time, but given up in favor of the *x*-ray, whose effects seemed more prompt and satisfactory.

Malcolm Morris reports 27 cases of rodent ulcer in which the *x*-rays were also employed. In 12 there were favorable results, but it is difficult to assign to actinotherapy its exact share in the cures.

Sjögren had 10 cases of rodent ulcer, with 5 cures.

In carcinoma Finsen's statistics show 17 patients, with 8 good and 2 fair results.

SYCOSIS.

While ultra-violet rays have been tried with some success, as in long-standing sycosis of the upper lip (Leredde, 2 cases), the method falls far short of the brilliant results following radiotherapy.

HIGH FREQUENCY CURRENTS.

As a result of a close clinical study of over 250 skin affections treated in my office by high-frequency currents,

the following conclusions can be drawn: (1) I am convinced that in a comparatively large number of dermatologic affections the local action of high-frequency currents aids in their cure. (2) In a limited number of patients in whom nutrition is at fault, D'Arsonvalization or autocondensation helps to bring about a prompter removal of local lesions. (3) In parasitic affections, while it has an influence, I have not been able to convince myself that the results are prompter or better than in older methods. (4) That the broadest field of usefulness is in the markedly pruriginous affections, and in those intimately connected with the nervous system and associated with pain. (5) An important, and, as I believe, a growing sphere, is that filled by the high-frequency spark in the almost painless destruction of the small neoplasms, including nevi, moles, warts, tumors and malignant growths, as well as in lupus and lupus erythematosus. (6) Compared with the Röntgen ray, skin affections as a whole are less benefited by these currents; but the two methods often enhance each other's influence.

Basing general conclusions on nearly 450 personal cases, beside the 250 mentioned as having been subjected to high-frequency currents, I think the following statement may be made:

CONCLUSIONS.

1. In the vast majority of cutaneous affections the Röntgen ray is of greater utility than either the actinic or high-frequency methods.

2. In lupus the Finsen method, though tedious and disagreeable, is efficacious. The combined ray and high-frequency spark may prove to be equally good.

3. The actinic method is less beneficial in cancer than the Röntgen ray.

4. The high-frequency method is exact, no more disagreeable than the actinic, and for small lesions of epithelioma, lupus, lupus erythematosus and many skin diseases gives quicker and better results.

5. All three can be advantageously combined for the different stages and phases of a large class of affections.

30 East Thirty-third Street.

DISCUSSION.

DR. W. T. CORLETT, Cleveland—A little over a year ago I visited some of the dermatologic centers of Europe, starting with Copenhagen, where, through the courtesy of Professor Finsen, I had the opportunity of studying the light treatment and of becoming familiar with the Medicinske Lysinstitut. I remained there eight days, which enabled me to observe some of the results of his treatment. Some of my conclusions on leaving Copenhagen were that in lupus erythematosus the Finsen light was superior to the Roentgen ray, and gave better results in a greater number of cases; in fact, I thought it the best method I had seen. The second disease, which was especially well treated, was vascular nevus. In two cases of this disease observed, one was practically cured, and the other, which was still under treatment, about half of the area having been gone over showed better results than I had seen by any other method. Through Germany to Vienna I saw the Finsen light used in almost all the hospitals, and very badly used in most of them, especially where nurses were subsidised to apply the treatment. Finsen is very particular that the light is accurately focused on the area to be operated on. One of the most interesting experiences in this connection was Lang's clinic in Vienna, where three methods were employed in treating lupus vulgaris: first, came a group of cases under treatment with the Roentgen ray, another group treated with the Finsen light, and the third class of cases under the older surgical procedures. Every Friday the progress made in these cases was compared. No definite conclusions had been arrived at as to the advantage of one or the other form of treatment. In Paris one hears of many improvements in the Finsen light, but the results I saw were not good, and the so-called improvements in the appliances were, in my opinion, inferior to those used in Copenhagen. In London, where, next to Copenhagen, the light is best given, I saw many of these modifications of the Finsen light apparatus relegated to the garret, where they were dust-covered and unused. Briefly, the impression gained after months of careful study and comparison was that the most efficacious rays were those found in the the Finsen light as originally given out, and that the instruments made in Copenhagen, although inferior in mechanical construction, are the best procurable at present. Moreover, I believe of the two methods the Roentgen ray has the larger field of usefulness. As regards mucosus fungoides and its treatment, in Vienna I saw one-half of the body exposed to the Roentgen ray, with complete subsidence of the disease on one side, the unexposed side being unaffected. I have used the *x*-ray in one case of mucosus fungoides now under treatment at Lakeside Hospital, with apparently good results, so far as the individual lesions are concerned.

I would like to ask Dr. Allen if he has actually found the high-frequency current beneficial in *x*-ray burns. How long, in the case referred to, was the *x*-ray burn in healing? Some of us, I know, have had experience with *x*-ray burns that have lasted almost indefinitely. We have all seen cases of syphilis treated with the Roentgen ray, and other most ridiculous mistakes are constantly being made.

I have used the high-frequency current for about two years in lupus erythematosus, at first with some improvement in the cases thus treated, but, as I previously stated, the disease goes away of its own accord, at least in all of the cases thus treated the disease has promptly returned. In alopecia areata I have used it as a counter irritant. In acne I have used it in the same way, as a stimulant, and some cases seem to get well, but any other stimulant might act equally well. In pruritus it has failed to allay the itching.

DR. W. S. GOTTHEIL, New York City—I would emphasize the absolute harmlessness of the Finsen method; I have never seen it do any damage to the patient or to the operator, and I have employed it extensively. There is no doubt at all that the concentrated light of an effective arc not only penetrates the tissues, but can be made to traverse the entire body. I published the results of my experiments in the *Medical Record* last year. I must protest, however, against the results published by operators using small and inefficient light sources. Power (amperage) is required for penetration and therapeutic effect. Arcs running on less than 40 amperes are useless; I employ 50 to 60, and Finsen and his collaborators now use 100 ampere arcs. No satisfactory results can be gotten on arcs of 10 or 15 amperes, and the machines using incandescent bulbs, no matter of what candle power or in what combination, have next to no actinic power at all, and are merely diaphoretic agents. Actinotherapy has a place in cutaneous therapy, but results or non-results claimed to be obtained by measures that are manifestly useless should not be credited to the actinotherapeutic method.

DR. M. B. HARTZELL, Philadelphia—We formerly heard a good deal about the necessity of accuracy of dosage, but in the use of this remedy, as in others, it is not so much the size of the dose as the effect produced. We all know how much remedies differ in effect on various individuals, so with this; in one individual you obtain a decided effect after a few exposures, in another almost no effect after a great many exposures. While it is necessary to be careful that we do no harm we must employ the remedy for a certain effect, not to give a certain dosage. There is no doubt that in this remedy, as in all others, accuracy in dosage is desirable. The remedy is being employed in every sort of disease; every kind of disease is being reported as cured; for example, I may refer to alopecia areata. We all know how promptly the hair will sometimes fall out after the employment of this remedy, and it seems curious that we should employ the same remedy to promote the growth of the hair. I have doubts as to whether this remedy should be tried in a case of alopecia. Ordinary alopecia, we all know, is

capricious and the hair may return after a few months spontaneously, but if the Röntgen ray has been tried it gets the credit for something with which it had nothing to do. As to the use of the Finsen light in this country, where lupus is a rare affection, its employment is restricted. It requires a tremendous length of time, and the area treated at each sitting is comparatively small. As to the final result there is very little difference between the *x*-ray and the Finsen light; you can obtain as satisfactory results from a therapeutic and cosmetic point of view with the former as with the latter.

DR. M. H. BAUM, Syracuse, N. Y.—In regard to the possible frequent error in diagnosis, where syphilitic lesions have been considered to be of the nature of lupus; in one instance a patient called on me just before taking a train for New York, having a large ulcerated lesion over the right brow. The impossibility of doing justice to the case in the limited time given, led me to refer her to a colleague in New York, and I am quite sure he made an error in diagnosis, considering it lupus. He applied actinic therapy, thirteen treatments, during which time the disease progressed. On her return a careful investigation disclosed the fact that she was a specific patient, and had elsewhere on the body other lesions of syphilis. The ordinary constitutional treatment cleared up this trouble. An opposite experience was a case of very extensive ulceration involving the lower occipital region and both sides of the neck, that applied to Dr. Weigel of Rochester for treatment. A diagnosis had been made of tubercular ulcer, and while he did not concur in the diagnosis he used the *x*-ray, with the result of healing these ulcers quite promptly. In this case the re-growth of hair was illustrated. The patient's hair below the occipital region was entirely removed, and no follicles could be seen. I have seen the patient within a few days, and the most luxuriant hair on her head grows from the patch made bald by the *x*-ray. The case was seen afterward by Dr. Hyde and others, who agreed that it was specific, and while these lesions healed under the *x*-rays, new ones would break out. She finally recovered under strong antiluetic treatment. The germicidal value of high-frequency currents was shown in a case of bubo which had been opened by my assistant. Cultures were made from the secretion, showing a tremendous variety of pus germs, particularly the staphylococci. It was teeming with them. The interior of the bubonic tissue was treated directly with the high-frequency electrode. After the second treatment another culture was made, which was negative, and in a few days this tremendous ulceration healed entirely, and at no other time was it possible to get a culture of any sort. No other germicide was used. I have treated one case of pruritus of the scrotum which was of 20 years' duration, where the scrotal tissues were leathery and thickened; I never saw a case so extreme. This patient has had no other application than the high-frequency current, and there is entire regeneration of the tissue and recovery. There is no more pruritus nor distress and the tissues are normal.

DR. JAY F. SCHAMBERG, Philadelphia—We have been using actinic rays of light in the treatment of cutaneous diseases at the Philadelphia Polyclinic for about a year and a half. The lamp in use is the London Hospital lamp. A number of cases of lupus vulgaris and lupus erythematosus have been faithfully and perseveringly treated. Some have received as many as two hundred treatments. The results in lupus vulgaris have on the whole been disappointing. While improvement was noted in some cases it was not pronounced enough to warrant the time, trouble and expense involved. I am firmly of the opinion that these various modified lamps, of which the London Hospital lamp may be considered a type, do not produce sufficient penetration to cure deep-seated and long-standing lupus lesions. A pronounced superficial reaction amounting to actual blistering may be secured by exposures of an hour or an hour and a half, but we have repeatedly treated lupus nodules in this manner without affecting their disappearance. With the *x*-rays in lupus vulgaris brilliant results are often obtained. But all cases of lupus vulgaris do not react equally well to the rays. Indeed, some cases appear to be but little influenced by them. In the present state of our knowledge it would appear that the best treatment for lupus vulgaris is the Finsen light, applied, however, with a powerful lamp. The *x*-rays, I believe, are to be preferred in lupus of the mucous membranes, in lupus accompanied by ulceration and in papillomatous cases. In one case of lupus erythematosus with pronounced vascular dilatation great improvement has followed the use of actinic light with the London Hospital lamp.

DR. C. E. SKINNER, New Haven, Conn.—In reference to the remark which was made a few moments ago that the *x*-rays should never be recommended as a remedy for falling hair, I would like to say that although, as a rule, the application of the *x*-ray will cause the hair to fall out, and if it is repeatedly killed in this way that it will after a while fail to come back, yet it is not such a very uncommon thing for those who use the *x*-ray extensively as a therapeutic agent to see the growth of hair very noticeably accelerated on parts which have been exposed. In a case in which the neck was being radiated for enlarged cervical lymphatics, after treatment for several months there appeared on the side of the neck radiated a growth of hair an inch and one-half long where normally there had been nothing but very rudimentary hair structures. This case will soon be reported. I do not feel competent to state whether or not the *x*-rays should be recommended as a remedy for alopecia, but the stimulation of the growth of the hair which has been so often reported and which undeniably obtains in so many cases, should be given due consideration before the measure is unqualifiedly condemned as a remedy for this condition.

DR. A. E. CURRIER, Detroit—Regarding the recurrence of hair after its destruction by the *x*-ray, I have a patient suffering from mycosis fungoides and after raying the whole body he said his daughters made the statement that his hair was getting thicker and becoming darker in color, and such was the fact. There were a number of lesions on the forehead and I took no pains to protect the scalp. Another case was one of lupus, and the first case from which I got quite a severe burn in the use of the ray. A large patch of alopecia resulted, but the hair has returned, which I think is usually the case after the use of the *x*-ray. In my experience the use of the ray on the mucous membrane has not been very favorable. In a case of lupus, where the ray was applied to a lesion on the conjunctiva, no effect was produced. The eyeball became affected and was removed. In spite of this and a number of curettements, the lupus lesion still remains in the orbit, while a number of patches of the diseases have entirely disappeared from other parts of the face. I would ask Dr. Allen to give us his technic of the high-frequency current.

DR. H. R. VARNEY, Detroit—In order to get prompt results in most skin affections under the light treatment it is important that we curette the area or perhaps apply arsenical paste to remove masses, and then push the light treatment, whatever it may be, as rapidly as possible without necrosis of the new tissue. We have all seen cases where the lesion treated after becoming accustomed to the ray has come to a standstill, so I would emphasize the importance of pushing as rapidly as possible any light treatment. As to *x*-ray dermatitis, the cases I have seen where there has been necrosis have been in alcoholics. There seems to be very little cell resistance in alcoholic patients, and the most destructive burns I have seen have been in this class of cases. As to medication for dermatitis, I have found none that would relieve the condition, but, on the contrary, would aggravate the existing dermatitis. My course in dermatitis, wherever developed, is to see the patient every other day and give a short treatment with the ray, not stopping my treatment altogether, but give a mild two, three or four-minute treatment with the ray, and I can check the dermatitis that way better than with any local treatment and allowing the patient to go away and perhaps fall into the hands of some other physician, with the burn. This I make as an important point. In my early experience I would allow a patient to stop all treatment with a burn of the first or second degree, but now I believe it is possible to check those conditions by mild treatment with the tube further away and shorter duration. My experience with the high-frequency current is of little interest, as I have used it but a short time.

DR. L. DUNCAN BULKLEY, New York City—Referring to a

point made by the last speaker, I have seen great benefit in mild *x*-ray dermatitis from its continued, and even rather frequent use, every few days, in a very mild degree. I do not know why I first suggested it, but on seeing the dermatitis, partly to keep up the effect and partly hoping that all would go well, I said, let us try two or three minutes at a greater distance of the tube. I did not see any indication for stopping it entirely. The gentleman also remarked that he did not find anything else to control it. I find that a 25 per cent. watery solution of ichthyol painted over an *x*-ray burn makes it more comfortable, and I think helps heal it more quickly. I also use an ichthyol ointment. I know personally of the brilliant results from the light treatment of lupus in Copenhagen, but the same results are not often obtained elsewhere, partly because many attempt to make the treatment with too short and severe an application, and thus get the external effects before the light has penetrated into the deeper tissues, and the lupus develops again because it has not been radically destroyed. In regard to the use of high-frequency currents, I think that we are just beginning to know what they will do. I do not know whether many of you have tried the high-frequency currents, with a carbon point, on vascular nevi. I have had two very striking cases. One was in a young girl who was several months in the hospital, and the results of the treatment of a port-wine discoloration which affected a large share of the face were certainly remarkable. The other case is still under treatment. Certain portions beneath the eye which we have treated are to-day normal and at ordinary talking distance you would not notice any redness. I burn the surface a little with the carbon point, so that there is almost a vesicle formed; the destruction goes just deep enough to alter the tissue and yet leave practically no scar. Time and again it is done, very superficially at first, subsequently going a little deeper. I am thoroughly satisfied with the portions which I have treated. In pruritus the high-frequency current is very valuable in relieving an itching dermatitis. I do not know how many of you have used the high frequency for warts, especially of the scalp, where they are sometimes very annoying. The carbon point, with high frequency, is applied to the wart until it is blistered, and there is a little hemorrhage, and the wart then dries up, and when the crust has fallen, in a few days, the surface is level. Two or three applications may be necessary.

DR. C. W. ALLEN—Dr. Corlett's question brings us to the subject discussed by Dr. Hartnell, whether the high-frequency current is of any benefit in *x*-ray dermatitis. In a general way, it is. Not only in the superficial second-degree burn, but also in the ulcer which has resisted other measures for a long time, and I base this view largely on the treatment of one particular case. It was a deep-seated lesion supposed to be a cancer of the liver, sent to me by Dr. Waldo, who asked me to treat it for him. I accepted the diagnosis; it looked to me like cancer of the liver, and I began to treat the woman. After treating her for some time she suddenly developed a very pronounced necrotic burn. When I left for Europe last March I gave her a note to a colleague, asking him to excise the ulcer. She had a pendulous abdomen, the tumor had gone down so, and the ascites had disappeared so that there was room for excision. On my return from Europe I found she had not presented herself to this gentleman, and not hearing from her I mourned her as dead; I thought she was entitled to die from her carcinoma and dismissed her from my mind. A short time ago, on entering my waiting-room, there she sat, looking very much better than when I last saw her, and she said she was much better; said she had done nothing since, but had stayed at home and consulted no one. The burn had healed about the margins, presenting the picture with which you are so familiar, an ulcer in the center covered with a persistently recurring membrane, and showing absolutely no tendency to heal further in spite of various applications, powders, pastes, lotions, etc. (as a rule salves did not do well). I said to my assistant one day, "You start in with the *x*-ray or with the high-frequency current." Fortunately, he adopted the high-frequency method. I believe that the case was really never cancer at all, but syphilis and she developed a sudden bad burn because of the syphilis. If these tissues will react in that way in alcoholics they will probably do so in syphilitics, and I think in both classes of cases we have to be careful. Under the high-frequency current the ulcer began to pucker and heal up and now it is nearly healed. So I can say in my experience with both classes of cases, the second degree of burn and the third degree of burn, that the high frequency does well.

THE DEVELOPMENTAL DEFECTS OF THE SKIN AND THEIR MALIGNANT GROWTHS.

DISCUSSION.*

DR. JOHN A. FOORTCH, New York—Much interest is taken at the present time in the development of malignant growths, and a tendency is displayed to discredit the parasitic theory and attach more weight to the possible embryonic origin of malignant growths. A study of such cases as Dr. Anthony has included in his paper certainly has a tendency to encourage a belief in Cohnheim's theory of the development of these tumors in embryonic rests. Regarding the question of the so-called multiple benign cystic epitheliomas, experience has shown us that these cases are not always multiple. We may have single tumors on the face which show the clinical features and the histologic structure of benign epitheliomas. Some of the rodent ulcers which develop on the face may persist for years as small pearly tumors, possibly due to some congenital displacement of epithelium. I do not intend to say that in every case of epithelioma or malignant disease of the skin there must be some congenital abnormality. In epitheliomas of the lip or tongue, chronic irritation, or the pre-existence of some antecedent affection, like syphilis, is the chief factor in bringing about the disease.

DR. A. RAVOGLI, Cincinnati—I have had in my practice several cases of nevocarcinoma. I think four, in the course of three or four years, have died in consequence of carcinomatous metastasis, showing that nevocarcinoma is a very dangerous and malignant affection. I think we should study carcinoma as we do tuberculosis, and I think we shall see that carcinomas vary according to the tissues which are affected. I believe the resistance of the tissues which are affected has a great deal to do with the nature and the spreading of the epithelioma. We have for instance, a mild case of epithelioma which lasts eight or ten years without causing any trouble; a little limited ulcer or tumor, remaining for years without spreading, and later the process goes deeper and affects the tissues of the skin, which are loose and which allow the introduction of the cancerous elements into the system, and then we have the formation of these nodules, the secondary carcinoma, and then the metastases in the skin. I think that from the beginning a superficial epithelioma is not at all different from carcinoma; the only difference lies in the place where the carcinoma is situated and in the resistance of the tissues which isolate it and keep it from spreading. In the same way we have lupus vulgaris remaining for years without producing an infection. But if these nodules go deep into the subcutaneous tissue or lymphatic vessels, then we have the formation of a tubercular gumma, etc. I believe we have the same thing in carcinoma; the tissues of the nevi are very loose and of less resistance, and I believe that this peculiar looseness, this non-resistance of the tissues, has a great deal to do with the extension of the carcinomatous process.

DR. W. T. CORLETT, Ohio—To me the word nevus is more especially associated with derangements of the circulation, and when we apply nevus to abnormalities of development other than vascular, I think it becomes confusing. I am in accord with Crocker, who advocates employing the qualifying term, "embryogenic," when there is reason to believe the defects take their origin in fetal life. I have not seen that the children of syphilitics, or those one or two generations removed from a syphilitic subject, show any more tendency to the development of abnormalities of the skin than those without such antecedents. There is a popular belief among the laity that melanotic

*This is the discussion on the paper by Dr. H. G. Anthony, Chicago, the chairman's address before the Section on Cutaneous Medicine and Surgery, at the Fifty-fifth Annual Session of the American Medical Association, at Atlantic City, June 7-10, 1904. The article appeared in THE JOURNAL, June 18, 1904, p. 1606.

sarcoma frequently develops from pigmented moles, and from my clinical experience I think there are strong grounds for believing this to be true, in a large number of cases. One of the cases referred to by Dr. Ravogli, I think, also came under my observation. This woman had a pigmented congenital mole over the sternum. When she was about 25, this gave rise to a melanotic sarcoma, with metastasis, and death. This, in my experience, has been fairly common. I do not, however, wish to be understood as saying that all pigmented moles become malignant.

DR. A. RAVOGLI—Of these four cases of nevocarcinoma, two were pigmented and two were entirely unpigmented, and the two that were entirely unpigmented died in the same way in two or three years.

DR. J. A. FORDYCE—It might be well to bear in mind that nearly every one has a mole, but the occurrence of malignant growths is extremely rare.

DR. M. L. HEIDINGSFELD, Cincinnati—The lay term nevus includes so many widely dissociated clinical and histologic conditions, angiomata, pigmentations, teratomata, telangiectases, albinism, hirsuties, defects, etc., that I think it unfortunate that it should have ever attained scientific value. I believe that the chairman is taking a retrogressive step, however, in limiting the scope of the term merely to those conditions present at birth. That position was formerly taken by many authors, but to-day the most conservative, Besnier not excepted, include anomalies which develop, not only days and months, but even years after birth. Inasmuch as it must be conceded that many of these anomalies develop from tissues which to all appearances, and as far as positive knowledge permit us to judge, are perfectly normal for a considerable period of time, we can not afford to become too dogmatic in our study of causation and base the etiology of every case on the purely conjectural assumption of misplaced embryonic remains. It is probable that some of these anomalous growths spring from normal glands, follicles and tissues, incited to new growth and development by causes and influences equally obscure as misplaced embryonic remains.

DR. D. W. MONTGOMERY, San Francisco—I think that the slate-colored nevi are more likely to give rise to malignant growths than the buff-colored ones. I do not know whether that is a feeling simply or whether it is really a fact, but I have always looked on the buff-colored ones as practically innocent. I remember the case of a young girl who had a slate-colored nevus on one side of the great toe. She was being operated on when I first saw this nevus. The surgeon referred to it and said he would like to cut it out also, but he had not gotten permission to do so. Shortly afterward this nevus began to grow irritable and to thicken and leak. The surgeon then burned it down well with the thermocautery, and it healed with a good cicatrix. Soon after the girl consulted me for enlargement of lymphatic nodules in the groin, on the same side as the affected toe. I gave an absolutely bad prognosis, and could not advise operation. She died of very widespread metastasis. These metastases were sarcomatous, some of them inky black, some half black and half white, and some were wholly white, so that the metastasis did not follow exactly, as regards pigmentation, the original growth.

DR. H. G. ANTHONY—I have not a doubt, in answer to Dr. Fordyce, that single tumors may occur in benign cystic epitheliomas. Furthermore, I believe there are some tumors of traumatic origin which closely resemble these various malformations of the skin. In a certain number of cases these malignant tumors will develop in places in which there is no evidence of there having been previously a mole; but if you cut the tumor out and examine it, you will often find it has the exact histopathology of the mole. There is a decided difference between a carcinomatous metastasis and metastasis from one of these growths. A characteristic of the carcinomatous metastasis is that it is a transportation of the original tumor to the site of the metastatic growth. If a patient has a primary carcinoma of the stomach and secondary carcinoma of the liver, the secondary retains the character of the primary tumor, and you have an equivalent of a part of the stomach growing on the liver, so that by an examination of the metastatic growth you can sometimes determine in what part of the body it arose. These tumors have exactly the appearance and character of the epithelial cells of the nevus. I have examined metastatic growths in these tumors in all parts of the body, and always found the same cell present.

In regard to Dr. Corlett's statement that the word nevus should be limited to designate vascular growths, I would say that in this country it has never been used in that way. The surgeon and general practitioner use the term for any kind of growth that is present at the time of birth, and if you use it in any other way you will cause confusion. If you speak of a growth of the skin which develops at the time of puberty, and many of these do—benign cystic epithelioma and fibroma molluscum frequently do—they ask, how is it possible that a nevus should appear for the first time in adult life? Because of that objection I use the term developmental defect of the skin. If you use that and omit the word nevus everyone will comprehend your meaning; that is why I want to popularize this expression. In regard to anomalies of development being due to the toxins of infectious diseases, such as leprosy, syphilis and tuberculosis, I am not prepared to pass an absolute judgment on it; I simply hold it out as a suggestion, as one of the things which should be considered. In the majority of instances where dermatologists come in contact with malformations of the skin they make no effort to assign a cause. My position is that we should try our best to see if we can not assign a cause, and those two possibilities I have spoken of should be considered. Eulenburg's "Real Encyclopädie der Gesammte Heilkunde" says that it is settled that syphilis may cause defects in development. In regard to the statement that melanoma from a nevus is common, I do not think it is. If you will examine patients who come into the dispensary for various diseases you will be surprised to note that the person who has not a nevus on some part of the body is exceptional. Of the cases I have gone over since I had this subject in mind 90 per cent. had nevi. So a malignant growth developing on one of these nevi is exceptional. As to the color Dr. Montgomery has mentioned, I will state that it is a rule where metastatic growths occur from nevi the different growths differ one from another within wide limits. Without having my attention previously called to the slate-colored nevi, which are more apt to take on malignancy than others, I regard it as incidental. There is one thing that I believe influences to a certain degree the color of these nevi, and that is outward pressure. The outward pressure of tumors seated in the deep skin very frequently will produce atrophy of the epidermis as they press outward, and the pigment will decrease. So that may be an element in producing the color, and when the tumor begins to grow there is a diminution of the color.

Dr. Heidingsfeld's statement that some of these anomalous growths spring from normal glands and tissues is not correct, because, first, they appear in succeeding generations; second, they are usually present at birth; third, they have a systematic arrangement. I agree that it is unfortunate that the word nevus should ever have obtained scientific value and that is the reason I wish to drop it as a scientific term and substitute the expression "developmental defect"; the meaning of which can not be misunderstood and which is not a step backward.

Safe and Certain Cure for Ankylostomiasis.—The *Gazette Méd. Belge* comments with amazement on the scant attention paid to the announcement made at the last international congress of hygiene in regard to the discovery of an absolutely safe and certain cure for ankylostomiasis. The Liège physician who made the announcement has found in his extensive experience that it always destroyed the parasite and neutralized the toxins without fail. It is merely a mixture of 1.5 to 2 gm. of sulphur, .4 to .5 gm. of terpin, and 1 to 2 gm. of condurango. He advises to give it indiscriminately to all the workmen in an infected mine, as it can not harm the well, while it cures the affected subjects. The *Gazette* does not mention the name of this comforter, but in an editorial, xvi, No. 5, states that the future will inscribe his name as one of the greatest benefactors of humanity, as with this simple, inexpensive and harmless medication ankylostomiasis can be entirely eradicated.

THE CONSIDERATION OF LATE HEREDITARY SYPHILIS.*

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On several occasions young girls from 5 to 18 years of age have been shown at meetings of the Chicago Dermatological Society, who presented undoubted lesions of tertiary syphilis, without a history or extragenital infection or previous eruptions of syphilis, and in whom none of the triad symptoms of hereditary syphilis was present. In the discussion of these cases it was apparent that a difference of opinion existed as to whether these were cases of extragenital infection or cases of long periods of latency in hereditary syphilis. The question which arose was: Can hereditary syphilis manifest itself for the first time some years after birth by the presence of such late lesions as occur in the acquired form, and with a total absence of triad symptoms?

That long periods of latency is one of the chief characteristics of acquired syphilis there can be no doubt, as we all have seen cases in which from ten to twenty years have elapsed from the time the disease was acquired to the time the tertiary symptoms appeared.

If long periods of latency may occur in the acquired form of syphilis, why may they not occur in hereditary syphilis? Syphilis is the same whether acquired by the individual himself directly, or transmitted to him by his parents at the time of conception. Such being the case, then we might expect to find long periods of latency in hereditary syphilis, and, if long periods of latency do not occur, then this form of the disease differs from ordinary or acquired syphilis.

While it often may be extremely difficult to establish the fact that children born of syphilitic parents and exhibiting late lesions may not have had other lesions early in life, still such cases are not infrequently met with. They must, however, be very carefully scrutinized, in order to avoid error. The ease with which one may be deceived in this matter is illustrated by the following cases: I have under observation at the present time several children who presented symptoms of hereditary or congenital syphilis at the time of birth, but who are entirely free from evidence of the disease at the present time. Were these children to be observed at the age of 20 years, and lesions of syphilis be found present, these children never having been informed by their parents or physician that they were born with the disease, would naturally give a negative history, and their cases readily be misconstrued or accepted as cases of acquired syphilis.

In establishing a diagnosis of hereditary syphilis, there are three points, known as the triad of syphilis, which have long been looked upon as of the greatest value. These are, namely, Hutchinson's teeth, interstitial keratitis, and a particular form of deafness. Let us consider these points in order:

TEETH.

Great stress has been laid on the diagnostic value of the Hutchinsonian teeth, but they in themselves are late manifestations of inherited taint, and can be accepted in no other sense. They are not present in the first or temporary teeth, but in the second or permanent teeth, which do not appear until the fifth or sixth year, and are not always indicative of syphilis when present, as J. C. White[1] has reported a case of a boy who presented the central incisors notched from side to side, with the lateral incisors wanting, in whom the suspicion of syphilis was absolutely excluded. The other teeth were normal. The deformity followed a sudden and severe attack of cervical adenopathy. Again, the characteristic teeth are present in only a minority of those who are the subjects of inherited syphilis, and it is unquestionably true that teeth of perfect development may not infrequently be seen in the mouths of those who have suffered severely from inherited taint.

INTERSTITIAL KERATITIS.

This is perhaps the most frequent of Hutchinson's symptoms, and occurs usually between the ages of 6 and 15 years; but, unlike the Hutchinson teeth, it may appear as early as the second or third year of life. Fournier claims this symptom may be due to malnutrition, as well as to inherited syphilis, and no differentiation between these two etiologic factors can be made in the effects on the cornea.

LABYRINTHIAN OR CENTRAL DEAFNESS.

This syphilitic deafness, depending, possibly, on lesions of the auditory nerves, is most frequently met with in children about the age of puberty, or in adults, and manifests its presence by the following symptoms: It is, as a rule, unilateral in the beginning; but after a shorter or longer period, varying from a few weeks to some months, the other ear becomes affected, deafness appears suddenly, and advances rapidly; it is not accompanied by pain, or any discharge, although occasionally an otitis media purulenta may be present. The patient complains of noises, dizziness, and sometimes even attacks of vertigo occur. The deafness is usually progressive, and after some weeks may become absolute. It is not improved by anti-syphilitic treatment.

While the above-mentioned points are of great diagnostic value in hereditary syphilis, there are others which, although perhaps not so common, are nevertheless of much significance when present.

Among these may be mentioned acute ulcerative destruction of the palate in young persons. This in itself is almost conclusive proof of an inherited taint.

Edmond Fournier[2] and some other French writers lay great stress on the findings in the fundus of the eye as an aid in the diagnosis of hereditary syphilis. In one case he describes atrophic chorio-retinal plaques in both eyes.

In another case the remains of an old papillitis was seen. Vascular changes, and alterations of pigment, which the oculist, Antonelli, stated could only be the stigmata of hereditary syphilis, were observed in one eye, and in the other there was a rudimentary optic neuritis, a diffuse retinitis of several months' standing, manifesting itself by several foci of exudations in the central region, by a suffusion which was quite extensive, and by multiple separations of the retina in the temporal and upper sections of the eye fundus.

Late hereditary syphilis may affect the skin, appearing as gummata, singly or in groups, of solid nodules, which are dark red in color, and are most frequently seen on the face or forelegs. These nodules may later break down and ulcerate. On the face they most frequently attack the nose, and when on the legs the anterior surface. The ulcers are sharply defined and clearly

* Read at the Fifty-fifth Annual Session of the American Medical Association, in the Section on Cutaneous Medicine and Surgery, and approved for publication by the Executive Committee: Drs. H. W. Stelwagen, J. A. Fordyce and H. G. Anthony.

1. Archives of Dermatology, April, 1878.
2. Annales de Derm. et Syph., 1904, p. 152.

cut, with abrupt, uneven edges, and present the usual characteristic appearances of the ulcerating gummata of acquired syphilis. Unlike early acquired syphilis, we never have any scaly or small papular eruptions.

Notwithstanding all of these points, it must be admitted that there are patients in whom, in spite of the modern development of diagnosis, the recognition of inherited taint is still a matter of great difficulty, if not an impossibility. We must, however, be prepared to encounter now and then manifestations of inherited syphilis in those who do not show a single corroborative feature. Hyde[3] remarks that not every child with Hutchinsonian teeth, with cranial bosses, with natiform skulls, or suffering from a rebellious affection, is the victim of inherited syphilis, and that even the painstaking labors of A. Parrot have not sufficed to obliterate the distinction between syphilis and rickets.

Cases of latent hereditary syphilis are not very numerous in the literature:

Jordan[4] reports the following two cases:

CASE 1.—Patient, army officer, 22 years old. Applied April 23, 1902, for treatment for disease of the knee joint. He denied all knowledge of venereal disease. About the end of April, 1901, patient first complained of pain in both knee joints on climbing stairs. This without apparent cause. In June pain disappeared from the right knee joint, while the pain in the left became more intense. Early in July the army surgeon noticed a swelling of the knee joint and induced the officer to ask for a furlough.

Treatment.—No improvement was noted after treatment with baths and compressed applications, consequently the patient entered a surgical clinic in September, 1901. Effusion in the left knee joint was treated with iodin, compression and hot air. The swelling decreased in amount, but did not entirely disappear. Palpation of the joint was painful and an incision was made above the patella, under the supposition that the case was one of tuberculosis. Drainage of the joint with iodoform gauze. Examination of the urine was negative as to gonococci. The wound healed and the patient was discharged in November, wearing a plaster-of-paris dressing or cast. The end of March, following the swelling in the joint, which had never entirely ceased, became increased.

Examination.—April 1, 1902, when first seen by Jordan, the left knee joint was markedly swollen and tender, and there was slight swelling in the right knee. Both joints were freely movable. A thorough examination of the young man did not reveal any signs of a past tuberculosis or lues.

Treatment instituted consisted of complete rest in bed, baths and compression bandages.

Diagnosis.—A week later, notwithstanding this treatment, the swelling increased in the right knee joint, and closer observation gave the impression that the cause of this swelling was syphilis. Jordan made his diagnosis by exclusion. Hydrops could not be accounted for by its usual etiologic factor. Trauma was excluded. Acute articular rheumatism was absent. No signs of gonorrhea were present and also no tuberculosis. The negative results of the incision, combined with all the preceding features, brought him to the conclusion that this was a case of lues. The slow bilateral effusion in the knees, the slight pain, the insignificant functional disturbance, the changing of the symptoms and the failure of all treatment were all facts in favor of syphilis. As acquired syphilis was excluded with certainty, it could only be a case of late hereditary syphilis. The favorable result following specific treatment justified this diagnosis.

Family History.—The family history of the patient disclosed the following facts: The patient's father was a physician and became infected with syphilis on the hand while attending an accouchement in 1872. He married in 1877. His wife, who was still alive, stated that on several occasions he had had eruptions on the face, and took iodid of potassium.

Maternal history: First pregnancy in 1878. Premature birth. Child died a few hours after birth. Second pregnancy, 1879. Miscarried at five months. Child dead. Third pregnancy, 1880. A normal, healthy boy. (Jordan's patient.) No affections. Fourth pregnancy, 1883. Aborted at two months. Patient's mother, in 1886, had a stroke of apoplexy, but completely recovered. In 1887 she had an ulcer of the soft palate, which rapidly healed under antisyphilitic treatment. The patient's father spent nine months in an asylum in 1882 for some brain trouble. Marked improvement. In 1883 committed suicide.

The diagnosis in the patient's case was latent hereditary syphilis. The treatment was sodium and potassium iodid, with the result of complete recovery. In November the patient resumed his duties as an army officer.

This case is considered a typical one of latent hereditary syphilis, with a single localization.

The second case was one of bilateral exudative gonitis, combined with keratitis parenchymatosa, in which complete recovery followed antisyphilitic treatment. The history of this case is as follows:

CASE 2.—Patient, a boy, 5 years of age, came to the clinic in July, 1895, suffering from a bilateral inflammation of the knee joints; the knees were swollen, and the ends of the bones considerably thickened. There was also a keratitis parenchymatosa. Dec. 15, 1895, after a course of treatment, the patient was discharged. In January, 1901, trouble appeared in the eyes. In the spring of 1903 the patient, who was now 12 years old, was again examined and found healthy. On the left cornea some cloudiness, due to scar, was found. This lessened the field of vision considerably. The joints were found to be normal. With the exception of the scar on the cornea, no evidence of syphilis could be detected.

Family History.—Father had an ulcer on the penis in 1881. Married in 1886, or five years later, and infected his wife in about a month. Symptoms in mother were roseola, condyloma of labia, and mucous patches in throat. By Oct. 28, 1886, all symptoms disappeared under treatment. In 1887 gave birth to child, which died two days after birth. In 1888 another miscarriage at six months; fetus dead. In 1889 again miscarried at six months; fetus dead. In 1890, the fifth labor was normal, and a boy, the herein-mentioned patient, was born. The next, or sixth, labor was normal, and the child, which at this time was 9 years old, was anemic and suffered from headaches. The seventh pregnancy: Premature birth, stillborn child. In 1895 eighth pregnancy, normal delivery at term; child at this time 7 years old and healthy. The ninth pregnancy was again premature; fetus dead. The last pregnancy occurred in 1898; labor normal and child healthy.

This case substantiates Fournier's observation that in a syphilitic marriage the birth of a healthy child does not warrant that the children which may follow will be healthy; but, rather, that a syphilitic child follows a healthy one. In this case the period of latency was five years.

Hünicken[5] (Brunic) reports a case of syphilis hereditaria tarda:

History.—The mother of the patient, who had always been healthy, was infected by her husband in the second month of her pregnancy. The corroborative symptoms of the mother's syphilitic infection were condyloma of the great labia and anus; roseola; angina; and periostitic headache.

Treatment.—The symptoms all disappeared after six months of antisyphilitic treatment (inunctions). It was expected the mother would miscarry. On the contrary, however, labor occurred at term, and a healthy boy was born. He remained healthy, with no evidence of syphilis; learned to walk when 2 years old; was vaccinated at age of 3 years. At 9 years old he complained of pain in the knee on walking. This was followed by swelling of both knee joints. Diagnosed simple synovitis. Was treated with ice, compression and rest for

3. Med. News, Dec. 14, 1897, p. 727.
4. Münch. med. Woch., 1903, 50, p. 1324.
5. Deutsche med. Woch., 1896, vol. xxii, p. 46.

three weeks, with no improvement. At this time both tibiæ were discovered to be highly sensitive to the touch. The diagnosis was changed to latent hereditary syphilis, and the trouble, after four weeks' treatment by inunctions and potassium iodid, entirely disappeared.

Barthelemy[6] reports the following case:

History.—A man contracted syphilis and was treated by Ricord for eighteen months, at the end of which time he married. For twenty-five years following he had no manifestations of syphilis. His wife bore him five children, all at term, except the last, when labor occurred at eight months. The first child was treated by Millard for submaxillary ulcerative lesions, which were diagnosed scrofulo-tubercular lesions. When Barthelemy saw this patient he took these lesions to be local bacillary lesions. She had become a woman, 25 years of age, and had given birth to a healthy child one year previously. The second child, a son, when 23 years old, was treated for two years for acquired syphilis.

Her third child, at this time a girl of 20 years, is the subject of this case. She has never had any stigma of syphilis, either on her body, teeth, eyes or ears. A month previously a bulla, the size of a fifty-cent piece, was noticed. This was thought to have been caused by a burn or stinging of an insect. Burning and itching were severe, and became more intense and deeper from day to day, until a large granulous wound was present, which showed all the characteristics of a tertiary ulcero-circinated syphilid, and a nummular gumma of the skin, which diagnosis Fournier confirmed, without reserve. The gumma was located on the knee, and appeared twenty years after birth.

E. Gaucher, Lacaperre and H. Bernard[7] report a case of latent hereditary syphilis with dental dystrophia:

History.—A female, 19 years old, was brought to the Hospital Saint Antoine, March 14, 1900, in a state of semi-coma. Examination revealed a right hemiplegia, with aphasia. Patient had given birth to a child a month previously.

The diagnosis made at the time was puerperal infection and metritis; bilateral phlebitis of the thighs; pulmonary embolism, which accounted for the pain in the thorax. To explain the hemiplegia and aphasia, it was supposed to have been caused by a fibrinous coagulation in the heart, which is slightly dilated. Patient positively denies any venereal infection, and of her father's history nothing could be learned. The patient's child died a few days after birth, showing no trace whatsoever of syphilis.

Treatment.—The appearance of the teeth attracted attention and suggested the possibility of syphilis, which suggestion was followed out, and the patient placed on daily inunctions, and four grams of kali iodid internally. Marked improvement followed immediately, and the patient was discharged from the hospital May 24, 1900.

One year later (April 21, 1901), patient returned to the hospital for consultation. There were present tertiary cutaneous gummata on the legs. The diagnosis was latent hereditary syphilis. Dental dystrophia revealed the presence of hereditary syphilis at 20 years of age. No previous accident would suggest the existence of syphilis, but a few months later the appearance of gummata on the legs and the effects of treatment confirmed the diagnosis.

Lannelongue[8] mentions a case of a young man, 34 years old, who had a typical gummatous ulcer on one of his legs, the nature of which had not been suspected until the patient consulted Lannelogue, who diagnosed latent syphilis of hereditary origin. He mentions also three more cases of latent hereditary syphilis, in young girls, who were about to be married, and who never knew that they were thus afflicted.

6. Annales de Derm. et Syph., 1890, 3d ser., vol. x, p. 262.
7. Annales de Derm. et Syph., 1901, 4th ser., vol. ii, pp. 437-46.
8. Bulletin de l'Acad. de Méd., Paris, 1903, 3d ser., vol. xlix, p. 532.

CASE 1.—Young girl, from a syphilitic father. Suffered with a gumma of the leg.

CASE 2.—Young girl, 23 years old, for past four years affected with a phagedenic serpiginous ulcer of the leg.

CASE 3.—Young girl, 20 years old, affected with gumma of the soft palate.

H. G. Anthony[9] reports a case:

History.—Twenty years ago a man acquired syphilis. He married while the roseola was present, and immediately infected his wife. A child was born three years after the marriage. Eleven years ago, when the child was 6 years old, he examined the family. The father and mother showed unmistakable evidence of the disease, but the child was free from symptoms of hereditary syphilis. Since this examination the mother, knowing that she herself had had syphilis, has always been very solicitous regarding the welfare of her daughter, and watched for skin eruptions or other possible symptoms of the disease, and up to this time she had never observed anything of a suspicious nature.

In October, 1903, she brought her daughter to Anthony again. She was 17 years old, and was found to have a circinate, ulcerating, tubercular syphilid, situated on the anterior surface of the chest. There was nothing in the history of the case which would in any way suggest a possible extragenital infection, and genital infection could be excluded as thoroughly as it ever can be.

Born of a syphilitic mother, who was known to be syphilitic at the time of conception, there is every reason to suppose that this is a case of hereditary syphilis, in which no appreciable evidence of the disease was present up to the seventeenth year of life.

L. Duncan Bulkley[10] reports the following interesting case:

Examination.—Mrs. H., aged 24; fairly well developed. When first seen there were the active elements of a tubercular eruption on the forehead, right ear, arms, knee and back. On the left arm there were two patches, of a dull-red color, about an inch and a half in diameter, composed of curved lines, or rows of tubercles, which have advanced, leaving scar tissue behind, which later surrounded the elbow. The right arm was similarly affected. On the shoulders was an eruption, dark red, or copper-colored, with some crusting in places, composed of irregular patches of tubercles, and cicatricial tissue by the side of the more recent disease. The eruption extended down the back six or eight inches. Near the left knee there was a patch of the same form of lesion, and a few scattered tubercles on the upper lip. All portions of the eruption presented the same features, composed of tubercles of a dark-red or coppery color, elevated from one to two lines above the surface, either touching each other or separated by an erythematous redness. The cicatrices are all alike; supple, mostly white. The more recent ones stained and slightly depressed. In the middle of the forehead there was a depression in the bone, pyramidal in shape, the apex resting at the bridge of the nose and being about two inches wide at the base.

History.—Of the origin of this she could give no exact account. It had taken place slowly, beginning, she thought, at about 16 years of age. There had never been any externally discharging ulceration there. When 5 years old she had a deep sore near the ankle, which lasted four or five months, and which left a scar. Two years afterward, when she was 7 years of age, the present eruption first made its appearance, and has continued since, a period of fourteen years. She had been under medical treatment off and on, but never with any great success.

Family History.—Her family history was not clear. She thought her father was healthy. A sister, 30 years of age, she said, had the same eruption; and her sister's children were also affected. She herself had been married seven years, and had had four children, two of which are dead.

This patient remained for a time under antisyphilitic treat-

9. Illinois Medical Journal, November, 1903, p. 388.
10. Archives of Dermatology, January, 1878, p. 70.

ment, and improved nicely, but disappeared before sufficient time had elapsed to accomplish a cure, so the ultimate results of treatment can not be stated.

The two cases reported by Willis S. Anderson[11] contain several points of interest. The histories are as follows:

CASE 1.—M. B., a girl, aged 16.

Family History.—Mother, apparently healthy, with no history of syphilis. Father not seen. Mother has had nine pregnancies. The first and second children were boys, who are alive and healthy; the third and fourth were prematurb, at eight months; bodies decomposed. The fifth was the present patient. The sixth, seventh and eighth are alive and healthy. The ninth died of pneumonia when nine months old.

Personal History.—The patient's general health has been fair. Eighteen months previously she had pain in her legs for a number of weeks. Has had enlarged glands in the neck for years. About two months before coming to the clinic, she noticed a pea-like swelling at the mucocutaneous junction on the left side of the septal cartilage of the nose which she thought was a cold sore. This increased in size, spreading to the upper lip and into the nose, especially attacking the septum. There were no pain or constitutional symptoms.

Examination.—The examination of the nose showed that there was an extensive ulceration of the whole cartilaginous septum, including the columna, and of the uper lip. The ulcerated aren was covered with thick crusts, and there was a foul, irritating discharge from the nose. The whole of the septal cartilage was nearly ready to slough out.

Treatment.—The next time the patient was seen, the entire cartilaginous septum, including the columna, was removed. The parts were kept clean, and potassium iodid given internally. The condition improved and the ulceration ceased.

CASE 2.—M. O., a girl, aged 14.

Family History.—No history of parental syphilis could be obtained. Mother always healthy; had had four children. Three alive and well. One died, aged seven months, of pneumonia. No miscarriages. Father is in excellent health, and denies ever having had syphilis.

Personal History.—Patient, when one year old, fell and struck on her nose, but no permanent injury resulted. Her general health has always been good and nasal breathing free. Six months before coming under observation she commenced to have obstruction to breathing through the right side of her nose. No cause could be discovered, unless possibly it was the result of boxing with her brother. The obstruction gradually increased, but was unaccompanied by pain or constitutional symptoms. She was brought for treatment, because of the obstruction, commencing deformity of the nose and enlargement of the lymphatic glands just below the angle of the jaw on the right side.

Examination.—Examination revealed a red, globular tumor, of about the size of a pea, attached to the right side of the septal cartilage, well forward. Just behind the anterior growth could be seen another globular tumor filling the nasal passage. There was bulging of the nose exteriorly, corresponding to the right ethmoid cells. As the nasopharynx was filled with the growth, it was evident that the tumor filled the whole nasal passage. There was marked swelling of the glands of the right side of the neck. The tumor in the nose was fairly firm in consistence; not painful, and did not bleed readily when touched. The glandular mass in the neck was not accompanied by any pain or tenderness. No ulceration was observed in the nose, and there was only a moderate acrid discharge. The growth in the nasopharynx had an angry appearance, and was covered with thick, tenacious mucus. The general health of the patient was little impaired. Her symptoms could all be accounted for by the nasal obstruction and the pressure of the growth.

Treatment.—The diagnosis of late hereditary syphilis was made by exclusion, and the patient placed on kali iodid internally and mercurial inunctions, with the result that the growth gradually melted away and the enlarged glands disappeared.

At the present time I have under my care the following case:

History.—A girl, 16 years old, is one of seven children, all healthy and robust. Patient's menstruation first appeared when she was a little over 15 years of age. About this time patient suffered intensely from pains in the legs and nocturnal headaches. On the right foreleg were noticed elevated red spots, as the patient describes them, varying in size from that of a split pea to almost, if not quite, the size of a twenty-five-cent piece. Within a month the left foreleg presented a similar condition to that on the right leg. When the patient first came under my observation, she presented typical ulcerating gummata on both legs, without any other evidence of hereditary taint, and an absolutely negative history as to any skin eruption or sickness of any character in the earlier years of her life.

Family History.—The mother of the patient is a subject of ichthyosis,, and states that she had had two miscarriages, occurring without apparent cause; the first at between five and six months, and the second at between six and seven months. On the right hip of the mother examination reveals a scar which resembles that following a syphilitic ulceration, although she denies all syphilitic history. The patient's father refused to be examined or interviewed.

Treatment.—Under antisyphilitic treatment our patient made a prompt recovery.

Fournier[12] says that latent hereditary syphilis may manifest itself at any age, from young adult up to old age (less frequently in old age), at 51, even at 60 years, and older.

We have grown away from the teachings of Kaposi, Barenspring, Lang, and others, who state that cases of latent hereditary syphilis are not authentic. They say that if this disease be congenital or hereditary, there must have been infantile manifestations. We accept as facts the teachings of Fournier, Neuman, Sigmund, Hebra, and others, that these cases are authentic, and do occur.

414 Marquette Building.

DISCUSSION.

DR. A. W. BRAYTON, Indianapolis—Those of us who are getting along into the second half century and have been practicing and teaching general medicine for twenty-five years can authenticate the statements made by Dr. Campbell in regard to the late manifestations of hereditary syphilis. I have never found a case of locomotor ataxia, and but few of general paresis, that I did not find a history of syphilis, and just as a parasyphilis may develop under varied conditions of acquired syphilis so we may look for late lesions in hereditary syphilis.

DR. L. DUNCAN BULKLEY, New York City—I have seen hereditary syphilis up to 20 or 30 years of age, and many cases even where there has been practically no clear antecedent syphilitic history. I do not, however, believe that a case of late hereditary syphilis never shows anything before. I have never convinced myself that there can be an infection and nothing take place until thirty years afterward, but I think that in many cases the earlier manifestations have simply been overlooked. I do not believe that anyone can look at a case of hereditary syphilis superficially and make a correct diagnosis. It is only by study, and by a careful consideration of a case, and exclusion of other conditions, that we can arrive at a diagnosis. Many of these cases that are often regarded as subjects of hereditary syphilis, I believe to be cases of constitutional syphilis, acquired during or after birth, which occurs much oftener than we imagine. Only a short time ago a child of two years was brought to my office with a large hard chancre on the prepuce. The father and mother were

11. New York Med. Jour., July 26, 1902.

12. Bulletin de l'Acad. de Méd., Paris, 1902, 3d ser., vol. xlix, p. 532.

certainly pure and free from any taint of syphilis, yet at two years of age the child had a chancre of the penis, not from circumcision. It was finally traced to the nurse, who had turned out to be a very loose character, and had just been discharged because she was found to be pregnant. She had given it to the child through lesions of the mouth. In the case of that child, if it had not been seen and diagnosed by some one who knew, but had recovered and had late lesions of syphilis, it could be readily supposed to be a case of hereditary syphilis, while it was really a case of early infection. Do not forget that those cases where you can not get a history may have had an infection early in life.

DR. C. W. ALLEN, New York City—Ranging myself with the older practitioners I would say that I have been teaching syphilis for a number of years, and I have had it happen many, many times, that in analyzing a case I have said to the students: here is a case where we can make out nothing but late hereditary syphilis without any history of preceding infection. I realize with Dr. Bulkley, that acquired syphilis may often escape observation. I have seen acquired syphilis in the very young where the parents have been healthy. I am convinced that without a preceding history, without knowledge of any syphilitic lesions having manifested themselves, an individual may arrive at the age of twenty or more years, up to thirty, and possibly far beyond that, and then show unmistakable lesions of syphilis.

DR. MORTIMER A. MOSES, New York City—Concerning the sign of hereditary syphilis described first, I think, by Silex of Berlin—the furrows at the angle of the mouth—is this sign of absolute corroborative value or is it seen in any other condition than hereditary syphilis?

DR. H. C. BAUM, Syracuse, N. Y.—I concur absolutely in all the findings of the paper. I had one case, a young woman 23 years of age, who had never employed a physician, but was delivered by a midwife. She came to the late Dr. U. H. Brown of Syracuse on account of a destructive gumma of the nose. He made a diagnosis of gumma, and his plan of treatment was indignantly rejected by the patient and by her husband, who had always been well, and by her mother, who accompanied her, and who was very much offended at any such suggestion; she herself having always been well, and never having had any other pregnancy than that of the patient. I was brought in and confirmed the physician's diagnosis, and yet treatment was refused. A year later she reappeared, with tremendous destructi.n, and applied for treatment. She responded nicely to treatment, and looking up the case afterward it was found that the father had died in a soldiers' home at Bath. I wrote there and was told the cause of death was syphilis.

DR. R. R. CAMPBELL—With respect to acquired infantile syphilis, it is gratifying to note that this form of the disease is far less common than is usually believed. Fournier has a record of but 45 patients of this class coming under his observation, though he adds that he believes, as many more have been seen by him, regarding which no notes were taken. In so far as I have been able to learn, the highest number of this class of cases reported by authorities other than Fournier, has been twenty-five. Replying to Dr. Moses, in my opinion the red furrows at the angle of the mouth can not be accepted as a symptom of any particular value in hereditary syphilis, for the reason that I have found it too often in the acquired form of the disease to grant it particular importance as an indication of the hereditary origin of the disease.

Hematemesis Substituting Menstruation.—Rapallo y. Vela of Madrid reports a case of gastrorrhagia recurring two months in succession at the periods of suppressed menses. The subject was a nervous, anemic young woman and the menses had been suppressed for several months. The gastrorrhagia was combatted by rest in bed and cold, fluid food, with hot applications to the lower abdomen and legs and appropriate tonic medication. Menstruation returned normal the following month and thereafter. The case is cited in the *Semana Medica*, No. 21, 1903.

HAS INFLUENZA BEEN A CAUSATIVE FACTOR IN THE INCREASE OF APPENDICITIS?*

PHILIP MARVEL, M.D.
ATLANTIC CITY, N. J.

In introducing a subject, the discussion of which is largely a matter of inference and analogy, I realize that I am presuming too much on the indulgence of a scientific body, and my apology may be stated in the desire for a more comprehensive knowledge of the causative agents of the diseases in question, together with the hope that this feeble effort will serve to stimulate a closer clinical observation bearing on the possible relations concerned, and especially a more extended scientific investigation looking to the nature and environment of the organisms involved.

THE HISTORY OF INFLUENZA.

A brief review of the many-sided disease—influenza—will recall to us its ancient and modern history. According to the report made by Parson to the British Medical Association in the year 1891, influenza was first recognized as an epidemic disease by Livy and Hypocrates in the year 412 B. C., and more than 200 years passed following their announcement before other supposed epidemics were recorded. During the sixth and ninth centuries Italy was said to have been visited two or more times by the same disease; this was followed in the early part of the tenth century by its appearance in Germany and France, after which time the world seems to have experienced a period of immunity for more than 200 years. Admitting that there may properly arise some question as to the accuracy of these earlier observations, Wilson states that our positive knowledge of this disease dates from the year 1510, when the first great epidemic visited Europe, including the British Isles. This was shortly followed by another visitation in 1557, and was the first of record observed in America. The history of the past four hundred and odd years records more than seventy epidemics, one-half of which have been so extensive as to deserve the name of pandemics. In the past century just closed there have been about forty visitations in this and European countries, those of special and more direct importance to us being of the winters 1889 and 1890, 1891 and 1892, 1894 and 1895, and that of the past winter, 1903 and 1904. I may state incidentally, however, that during the past five years the eastern and middle portions of our country have been more or less subjected to outbreaks of this disease, though less severe in form, than were the special epidemics to which reference is above made. The last epidemic of importance previous to the winters of 1889 and 1890, was in the year 1847, since which time a number of scientific investigators have been keen and persistent in their researches for the causative agent of this disease, believing it to be of bacterial origin, but it was not until the year 1893 that their efforts were crowned with any degree of success, at which time Robert Pfeiffer announced the discovery of an organism which he regarded as the specific exciting cause. This discovery has since been confirmed by no less able investigators than himself. It is not for me to challenge the statement that the Pfeiffer bacillus is the exciting or causative agent of influenza, and I shall raise no question as to this fact, whenever a pure

*Read at the Fifty-fifth Annual Session of the American Medical Association, in the Section on Practice of Medicine, and approved for publication by the Executive Committee: Drs. J. M. Anders, Frank Jones and W. S. Thayer.

and simple infection takes place, but in the greater number of cases observed there has been recognized the more probable presence of a mixed and complex infection, and therefore it does not seem in any wise conclusive that any bacillus, whether it be that of Pfeiffer or any other, can be held to be the only causative agent operative in this disease, unless, perchance, the physiochemical forces, when deranged or perverted by its presence, may in some way operate so as to convert otherwise harmless and innocuous bacteria into toxic-bearing and disease-producing agents. Momentarily leaving this part of the subject, I wish to refer briefly to the history of appendicitis.

THE HISTORY OF APPENDICITIS.

This disease may also boast of ancient history, though its recognition did not take place until during the second decade of this century. In the year 1836 Addison is given the credit of having first recognized and correctly described the disease in question, but according to our present knowledge of appendicitis, its recognition and description at that time gives no evidence that it did not exist as a disease long before. Its subsequent history has been given so much attention by both the medical and surgical world that reference to its more recent history would seem quite sufficient to bring the subject before us. With the early history of antiseptic surgery, the inflammatory diseases of the abdominal cavity received a fresh stimulus, and were dealt with from an entirely new point of view; and simultaneously with the treatment of typhlitis and perityphlitis, it led to an important controversy, the last word of which has not yet been heard. Foremost among the American surgeons to recognize and successfully treat this disease were Fitz, Weir and McBurney, with whose writings the most of you are too familiar to require further reference. The older writers did not altogether overlook the probable etiologic relationship between the diseases of the appendix and that of the cecum, as is particularly well shown in the writings of Grisolle, Rokitansky and Volz, but they were quite as much puzzled in their efforts to isolate the specific cause of the same, in those days, as we are in these.

Anatomically speaking, the appendix has about the same structure as that of the large intestine, but differs somewhat in its histologic relations, which may be considered of some practical importance bearing on this subject. The mucous membrane of the appendix during the earlier years of life contains an extraordinary number of lymph-follicles, which richness in lymphoid tissue makes it resemble somewhat the structural formation of the tonsil. Most important of these anatomic divisions, however, is probably that of the circulation, which is derived from the superior mesenteric artery, and forms an anastomosis with a feeble and insignificant collateral circulation from the cecum. Therefore, when disturbed for any reason, mechanical or otherwise, as by inflammatory swellings, adhesions or exudates, any of which may involve or lessen the lumen of the vessels, it will of necessity limit the arterial supply and immediately threaten the life of the tissue involved, thereby aiding the necrotic processes so often observed in the appendix. Some writers, among whom may be mentioned Ribbert and Kelly, claim that the appendix is but a relic of what was once a large cecal pouch, that has been and continues gradually undergoing involution. From the number of autopsies made independently by both, each reports the evidence of retrograde, atrophic changes, with the absence of inflammatory evidences in from 23 per cent. to 25 per cent. of the cases examined. The inference to be drawn from the foregoing reports is that if the said atrophic changes are taking place rapidly in this generation, involution would seem to make the appendix particularly susceptible and vulnerable to either toxic or infectious irritants.

The location of the appendix makes it singularly exposed to dangers arising from bacterial invasion and toxic absorption; and, again, the great preponderance of lymphoid tissue in it, during early life, which readily undergoes atrophic change, may have something to do with the fact that after thirty to thirty-five years the disease is known to be much less frequent than in the earlier periods of life, except that of the infantile or milk-fed period, in which it is noticeable that few cases occur. This observation may at least be interesting in the suggestion that with the introduction of the various forms and varieties of food, accompanied by the incidental fermentations which follow, the bacterial flora in the intestines become more abundant as well as possibly more virulent. The concretions, fecal and other kinds, have been present in a large number of cases, varying, according to reports of different writers, from 15 to 47 per cent.; however, their absence is yet sufficiently frequent, when considered with the conditions surrounding the involvement of the tissues in question, not only to indicate, but to make it more than probable that some form of bacteria is the active agent, and is necessary to provoke an attack of appendicitis, and that the coproliths play only a secondary part as a causative element, being regarded by many as accidental to, rather than causative of, the disease.

Returning to the first part of the subject, that of influenza, when we glance at the great number and variety of diseases, and of diseased conditions attributed to this malady, the list is so large that one is at once struck with astonishment, and the question involving the accuracy of so liberal an admission immediately arises, but so long as we remain in doubt as to the positive cause of the one, and the possible etiologic relation it bears to the other, we are in a questionable position to demand a more careful classification.

Therefore, if some of these diseases bear such a close relation to influenza as not to admit of a question, this can not be said with reference to the diseases more directly under discussion. If influenza has been a causative factor in the increase of appendicitis, the latter disease should have been increased in the localities wherein the former disease has been most prevalent, and the number of cases should have been increased, *pari passu*, with the frequency of the visiting epidemics; and, again, some evidence of appendicular involvement should have occurred with, or shortly following, convalescence from the former disease; also organisms common to both diseases might reasonably be expected to be found with or in some way allied in the retrograde changes associated with the progress of the invasion. The following references and personal observations, together with statistical data, are in support of the foregoing propositions. I have to regret, however, that I have been unable to find tabulated records satisfactorily supporting all of the claims above made, but your own personal observations and information obtained from other sources, namely, the current medical literature, etc., will strengthen your confidence, to the extent at least, of aiding you in accepting the possibility of certain changes and relative happenings, to which reference hereafter will be made. The medical literature of to-

day furnishes the burden of proof confirming the statement that influenza has been much more prevalent recently in the eastern, middle, western and northern states in our country than in the southern states, and doubtless the same may be said to be true in foreign countries. Reference to the same records affords no lack of evidence that appendicitis likewise has been more frequently observed in the former states or sections of the country than in the latter ones. Again, observations and reports of cases are not wanting in which to prove the occurrence of appendicitis associated with both the acute attack of influenza and during the period of convalescence. It is generally accepted that the cocci are very much more commonly found in the necrotic processes of both influenza and appendicitis than are the bacilli. In those cases where an early operation affords opportunities for bacteriologic investigation and the detailed accounts, as recorded by Stengel in the American edition of Nothnagel's "Encyclopedia of Practical Medicine," Volume 8, enumerate many of the latter which are found to be common in both diseases, but whether the bacilli or the cocci play the most important and active rôle in the early invasion, and can be considered directly causative in both diseases and not accidental thereto, is a question the bacteriologists have not yet settled. To the extent, however, as above stated, the relation is a common one.

Illustrative of and bearing on what has already been stated as supportive of the foregoing propositions, through the courtesy of the Pennsylvania, Episcopal and German hospitals of Philadelphia, I am able to present the following data taken from their annual reports, which strongly reflects the very great activity of the causative agent, or agents, of the latter disease, during the past period of five years, especially as contrasted with the former two periods of five years under consideration:

A detail of the cases of appendicitis treated in the Episcopal Hospital from 1889 to 1903, inclusive:

Disease.	1889	1890	1891	1892	1893	Total cases for five years.
Appendicitis—Medical	0	0	2	5	0	
Surgical	0	1	0	2	7	
Total cases each year...	0	1	2	5	7	15

Disease.	1894	1895	1896	1897	1898	Total cases for five years.
Appendicitis—Medical	7	4	0	0	9	
Surgical	15	33	48	53	57	
Total cases each year...	22	37	48	53	66	226

Disease.	1899	1900	1901	1902	1903	Total cases for five years.
Appendicitis—Medical	6	7	1	4	4	
Surgical	53	84	86	147	124	
Total cases each year...	59	91	87	151	128	516

A summary of the cases of peritonitis treated at the Episcopal Hospital, Philadelphia, between the years 1884 and 1903, shows that from 1884 to 1888, inclusive, there were 11 cases; from 1889 to 1893, there were 25; 1894 to 1898, 47; 1899 to 1903, 45; total, 128.

A detail of the cases of appendicitis treated in the Pennsylvania Hospital from 1889 to 1903, inclusive:

Disease.	1889	1890	1891	1892	1893	Total cases for five years.
Appendicitis—Medical	0	1	0	0	7	
Surgical	0	0	0	0	0	
Total cases each year....	0	1	0	6	7	14

Disease.	1894	1895	1896	1897	1898	Total cases for five years.
Appendicitis—Medical	9	20	10	34	0	
Surgical	0	0	0	0	51	
Total cases each year....	9	20	10	34	51	124

Disease.	1899	1900	1901	1902	1903	Total cases for five years.
Appendicitis—Medical	0	0	0	0	0	
Surgical	62	90	98	122	114	
Total cases each year....	62	90	98	122	114	486

A summary of the cases of peritonitis treated at the Pennsylvania Hospital shows that from 1884 to 1888 there were 44; 1889 to 1893, 55; 1894 to 1898, 77; total, 176.

The number of cases of appendicitis treated at the Episcopal Hospital, as above detailed, from 1889 to 1903, were respectively, from 1889 to 1893, 15; 1894 to 1898, 226; 1899 to 1903, 516; total, 757 in 15 years.

The number of cases of appendicitis treated at the Pennsylvania Hospital, as above detailed, from 1889 to 1903, were respectively, 1889 to 1893, 14; 1894 to 1898, 124; 1899 to 1903, 486; total, 624 in 15 years.

In the cases reported from Pennsylvania Hospital are included all cases of pelvic cellulitis, abdominal abscess, tubercular enteritis, typhlitis and perityphlitis, etc.

From the German Hospital the report includes only five years, beginning with 1899. In 1899 there were 223 cases; in 1900, 290; in 1901, 371; in 1902, 437; in 1903, 475—making a total of 1,796 cases, all operative cases. There was no attempt at arranging the acute and chronic.

If we study these cases from the records of the Pennsylvania and Episcopal hospitals together, in the first period from 1889 to 1894, we will find but a total of 29 cases; for the second period of five years 350 cases, or an increase of more than twelve times the number treated in the first five-year period. Again, if we study it from the standpoint of each hospital alone, in the Pennsylvania Hospital we will find 8.75 times as many cases treated in the second five-year period as in the first, and 34.66 times as many in the third or last five-year period as in the first. In the Episcopal Hospital we find fifteen times the number of cases treated in the second five-year period as in the first, and 34.41 times as many cases in the third or last five-year period as in the first. In studying the records of the last five-year period (which is the only one obtained) from the German Hospital, we find the increase, respectively, for each year over the first year of the period, for 30 per cent., 65 per cent., 94 per cent. and 113 per cent, or in round numbers, 1 3/10, 1 7/10, 1 9/10, and 2 1/10 times the number treated in the first year of this series.

If we take a summary of the cases of peritonitis from all causes as recorded in the Pennsylvania Hospital reports, from the years 1884 to 1889, there were 44 cases; from 1889 to 1894 there were 55 cases; and from 1894 to 1899 there were 77 cases, or a total of 176 cases. The records in the Episcopal Hospital during the same periods of five years each, respectively, show 11, 25 and 47 cases, making a total of 83 cases. The foregoing includes the number of cases of peritonitis from all causes, treated in both the medical and surgical wards, some of which doubtless have been included twice in the count, as it is more than probable that they were recorded first in the medical and afterward removed to and were enrolled in the surgical ward; and in the case of the Pennsylvania Hospital there is to be considered the addition of all cases of abdominal abscess, pelvic cellulitis, tubercular enteritis, typhlitis and perityphlitis, etc. While this data must not be considered as offering proof of the relation of the one disease to the other, it is at the same time exceedingly interesting and equally instructive in giving us an idea of the very great increase of appendicitis during the past five years, as contrasted with the previous five-year periods under consideration; and secondly, in the astonishing fact that in the Pennsylvania and Episcopal hospitals, both of which are known to have been provided with the services of some of the ablest and best known physicians and surgeons of the country (thus giving rise

to the least possible question of errors in diagnosis), there were operated on more than seven times as many cases of appendicitis in the third or last five-year period, as there were cases of abdominal inflammatory diseases of all kinds, of sufficient grade to cause peritonitis during the first and second five-year period preceding. In the Episcopal Hospital alone there were operated on 3½ times as many cases of appendicitis during the past year, 1903, as there were treated cases of peritonitis from all causes during the ten years previous to 1894, and 1 1/3 times as many cases as were treated from all causes, save those recognized as appendicitis, during the ten years just past.

If a similar comparison be made with the number of cases operated on at the German Hospital during the same years, the figures would read 13 1/5 times and 5 1/6 times the number of cases of peritonitis previously referred to. Therefore, it seems to me the claim is perfectly admissible, whatever may be the cause, that appendicitis has increased and has increased so very greatly in the past five years in general, and each year in particular, that we can not longer fail to recognize this fact, that the great increase has been largely within the past five years, and that no other general disturbance has been so prevalent within that time as that of influenza. In the Pennsylvania Hospital, during the three five-year periods under consideration, there were reported, respectively, 14, 124 and 486 cases of appendicitis, or 624 cases in 15 years, and in the Episcopal Hospital during the same periods there were treated, respectively, 15, 226 and 516 cases, making a total of 757 cases, in the corresponding period of fifteen years, and together in the two hospitals a total of 1,381 cases. In the Pennsylvania Hospital the past five years ending with 1903, there were 486 cases. In the Episcopal Hospital the past five years ending with 1903, 516 cases, or a total of 1,002 cases, leaving only 279 cases treated at the above hospitals, viz., Episcopal and the Pennsylvania, for the previous period of ten years, or an average of 27.9 cases each year, as contrasted with 201 for each year in the last five-year period, viz., from 1898 to 1903.

With reference to the records of the German Hospital, my studies have been confined wholly to a period of five years, beginning with 1899 and ending with 1903, which reports give the yearly records, respectively, of 223, 290, 371, 437 and 475, or a total for the past five years of 1,796 cases, making a general total treated in the three hospitals during the past five years of 2,798 cases, or an average of 559+ per year, and 2.13 times as many in 1903 as 1898.

Being desirous to know how some of the representative men of the profession felt with reference to the subject under discussion, I addressed a letter to each of the following physicians and surgeons, namely: J. M. Anders, Philadelphia; Frank Billings, Chicago; Judson Daland, Philadelphia; Hobart A. Hare, Philadelphia; John H. Musser, Philadelphia; William Osler, Baltimore; John B. Deaver, Philadelphia; W. W. Keen, Philadelphia; William J. Mayo, Rochester, Minn.; A. J. Ochsner, Chicago; Roswell Park, Buffalo; John A. Wyeth, New York City; Chas. Stockton, Buffalo, N. Y.; and received an answer from all excepting Dr. Roswell Park, who was absent in Europe.

It seems quite a coincidence that the physicians were equally divided in their opinions for and against the possible influence influenza may have as a causative factor in the increase of appendicitis, while the surgeons, with one exception, expressed themselves favorably to the opinion that it has been a causative factor. I attach the opinions as expressed in the letters received.

PHILADELPHIA, May 3, 1904.

Replying to your query, "Has Influenza been a causative factor in the increase of appendicitis?" would state that, in my view, an affirmative answer is demanded by the facts. There is evidence to indicate that influenza and other infectious processes may invite appendicitis.

In a paper embodying a statistical study of influenza (The Philadelphia Hospital Reports, vol. iii., 1900, by the writer), it was shown that this disease increases the bodily susceptibility to typhoid fever, and more particularly pneumonia. In the same article the fact was illustrated by statistical evidence that influenza diminishes receptivity of the body to malarial infection.

It is doubtless true that infection with a specific microbe may be favored by the recent occurrence of an infectious disease due to some other organism; per contra, the occurrence of an infecting disease may not only establish immunity from the disease itself (e. g., measles and scarlatina), but also lessen or even destroy the receptivity to certain other diseases of the same class.

Judging from personal experience and observation, I am persuaded that attacks of influenza are sometimes complicated with or followed by appendicitis, and hence that a true etiologic connection of considerable significance between these two important, acute, infectious processes will be shown, by more extended observations, to exist.

On the other hand, there is much danger of confusing the abdominal symptoms of influenza with appendicitis. I have sometimes observed both pain and tenderness in the appendicular region in the course of otherwise typical influenza. Instances of this sort, however, are not to be regarded as being complicated with appendicitis. It requires the presence of localized resistance to render the diagnosis of appendicitis even reasonably certain. I have, however, met several cases in my experience in which influenza appeared to be the cause (although at times a somewhat uncertain one) of acute appendicitis. I would say that in all cases of influenza the diagnosis of a complicating appendicitis must be made with due caution and reserve. Very sincerely yours,

J. M. ANDERS.

CHICAGO, Ill., May 4, 1904.

In answer to your letter of the 2d inst., I am obliged to say that I have never seen a case of appendicitis which led me to believe that influenza had been a causative factor as related to it. Influenza has been so common in our country since 1889 that almost all people have suffered from the disease at some time during that period, but as stated above I can not recall any case in which appendicitis and influenza were in any way related.

FRANK BILLINGS.

PHILADELPHIA, May 3, 1904.

In my opinion, influenza has been an important etiologic factor in appendicitis.

JUDSON DALAND.

PHILADELPHIA, May 3, 1904.

In reply to your note of May 2, let me state that I have not noticed any relationship between influenza and appendicitis.

HOBART A. HARE.

PHILADELPHIA, May 4, 1904.

Only as influenza knocks down the resisting power of the individual can one realize its causal agency in the production of appendicitis. I have no exact data to give. I have no reason to think from my experience that the Pfeiffer bacillus has been productive of appendicitis in any of the large number of cases that I have seen.

J. H. MUSSER.

BALTIMORE, May 4, 1904.

I have no facts which would lead me to suppose that influenza has been a causative factor in the increase of appendicitis. I should say it has not been the case here, where we have not suffered to an extreme degree from the disease.

W. OSLER.

BUFFALO, N. Y., May 5, 1904.

I believe that influenza has been a causative agent in producing appendicitis, for the reasons that it is an important factor in lowering the general resisting power of the economy; that it has been prone to involve the accessory cavities of the respiratory tract, and by analogy should affect those of the digestive tract; that in point of fact, tenderness over the region of the appendix is distinctly observed in a proportion of cases of intestinal influenza; and, finally, that following an epidemic of influenza clinicians believe that the proportion of cases of appendicitis has been larger. I am aware that this evidence is not beyond question, but I have none more positive to offer.

CHAS. G. STOCKTON.

PHILADELPHIA, May 5, 1904.

There is no doubt in my mind that influenza, being a causative factor of catarrhal conditions in general, during epidemics of the same appendicitis is more viable.

JOHN B. DEAVER.

PHILADELPHIA, May 3, 1904.

I have a very strong conviction that the prevailing influenza of the last few years has been a decided factor in the increase of appendicitis, especially of the catarrhal form.

W. W. KEEN.

ROCHESTER, MINN., May 3, 1904.

It is a new idea to us, and I can only say that I have not noticed that appendicitis was more noticeable during the influenza season.

W. J. MAYO.

CHICAGO, May 4, 1904.

In answer to your inquiry, I would say that I have encountered a considerable number of mild appendicitis cases which have appeared within a week after the beginning of a severe influenza, and I had considered this condition as a cause of the disease.

A. J. OCHSNER.

NEW YORK CITY, May 3, 1904.

In answer to your question, "Is influenza a causative factor in the increase of appendicitis?" I would answer: In view of the fact that influenza diminishes the normal resistance to septic infection it must of necessity increase the dangers of infection from the appendix.

JOHN A. WYETH.

The following abstracts, with the exception of the first, have been gleaned from foreign literature:

FINNEY and HAMBURGER, in a paper entitled "Relation of Appendicitis to Infectious Diseases," state that the clinical evidence proves distinctly the relationship between influenza and appendicitis. They were impressed by the increase of appendicitis during every epidemic of influenza; also, the close relationship existing between the two. They know six instances where appendicitis followed immediately or during influenza.—Jour. A. M., 1901, vol. ii, p. 941.

WINTERNITZ, "Bacteriology of Appendicitis," states that he found the influenza bacillus (Pfeiffer) in pure culture in one case of appendicitis, in which the appendix was removed in the interval, or subsequent to the attack. He further states this organism is capable of producing appendicitis, which must be of the prevalent catarrhal type, and it may change from this, without mixed infection, into the gangrenous form, as it is capable, without other assistance, of producing gangrene. The proof for this is the fact that it is not found normally in the intestine, but only associated with pathologic processes.

He considers this type of appendicitis as an abdominal influenza, and says that most likely many cases of appendicitis are due to influenza bacillus.—Oxford Medical Reflap, 1900, vol. xliv, No. 14 to date.

ADRIAN demonstrated influenza bacilli in a periappendicular abscess. Influenza was followed by a slight injury to the abdomen; the symptoms and signs of appendicitis followed at once; also sore throat and bronchitis, with influenza bacilli in sputum. Abscess in ileocecal region was opened; the pus contained the same organisms.—Mittellungen aus den Grenzgebieten der Medecine as Chir., 1901, vol. vii, p. 407.

PEYER, in a paper entitled "Influenza in Its Surgical Relations," reports his experiments and gives his results as follows: Upon injecting influenza bacilli into different parts of rabbits, he usually obtained general intoxications; sometimes he was able to get local suppurations; of 63 injections into abdominal cavity, Pfeiffer bacilli was found localized six times. Does not say in what organs.—Deutsche Zeitschrift für Chirurgie, 1901, lix, No. 1 et seq.

LUCAS-CHAMPIONNIÈRE believes in the direct connection between appendicitis and influenza. Believes it due to influenza by producing an intestinal catarrh.—Acad. de Medecine, February, 1901.

FRANKE says that he had often seen appendicitis within a short time after influenza; that they were in reality more commonly found together now than they used to be. He sees a direct connection between the two, through the intestinal catarrhs that are very common in influenza. In 1897 appendicitis seemed to be epidemic. He relates the case where three individuals of one family were attacked with appendicitis simultaneously after influenza. One was operated on because of pus, one recovered without operation, the third was operated in the interval because of constant colic, etc. He further relates two other cases in detail; the first recovered, the second did not. In the latter case the appendix was perforated; both followed during convalescence from influenza. He also relates a case in which pseudo appendicitis exists; neuritis, neuralgia of the abdominal nerves, may simulate appendicitis. Such cases are considered related by him; some given to come to operation. Other observers report such cases.—Mittellungen aus den Grenzgebieten der Medecine as Chir., 1899, vol. v, p. 208; and in vol. v, p. 2, same journal, he states that appendicitis is a much more common disease since influenza epidemics are so frequent.

PEYER, L., states that cases of appendicitis after influenza are common, and that appendicitis following influenza has been observed.—Deutsche Zeitschrift für Chirurgie, 1903, lxvi, 1.

TRIESKE reports a number of such cases.—Thèse, Paris, 1891.

LEICHENSTERN had many cases occurring during the influenza epidemic of 1889, and maintains there is a direct connection between the two. He further speaks of influenzal typhlitis and enteritis.—D. en W. 1890 No. 11, etc.

MERKLEN says that during the influenza the virulence of the intestinal bacteria is heightened, adding: "Appendicitis is much commoner since influenza has returned to us. In another article (also in Gaz. Heb'd., 1897, No. 24) he reports three cases of appendicitis in children following influenza. In these cases he believed there existed a family predisposition—viz., an enteric catarrh, which made it easy for the influenza to increase the virulence of the intestinal organisms.—Med., 1897, 104.

PEYER stated that appendicitis sometimes seems to be epidemic. He relates an instance where three members of one family were taken simultaneously with influenza and appendicitis. It may appear several days or several months after influenza. Its symptoms and signs do not differ from ordinary appendicitis. He has experimented with Pfeiffer's bacillus, giving it to animals by stomach tube in pure culture; also through a rectal tube. Gastrointestinal inflammations and suppurations were produced. The appendix was often in a state of suppuration.

FLORAND, "Nature and Treatment of Appendicitis," says that not all varieties of appendicitis require surgical interference, and mentions, therefore, catarrhal or influenzal appendicitis. That infectious appendicitis is common, but its manifestations are usually not severe. The majority recover without operation.—Semaine Med., 1899, 110.

FAIRBANK, in a paper entitled "The True Cause of Appendicitis," formulates the conclusions that grippe is the cause of appendicitis. He also states that the occurrence of the two diseases together is not a coincidence, especially as it is very common. Appendicitis is much commoner since influenza is prevalent, and at each annual epidemic the number of appendicitis cases becomes very common. He believes influenza to be a direct cause of appendicitis, and probably the most common cause.—Bull. et Med. del Soc. des Hop. de Paris, 1899, xvi, p. 335.

SCHULTES, in a paper entitled "Relationship between Influenza and Appendicitis," says during three former influenza epidemics he observed no cases of appendicitis, but during a grave epidemic of the last winter (156 cases) he observed three cases in whom the influenza bacillus had to be considered the causal agent. There were nine cases of appendicitis during the time of this last epidemic which he was able to collect.—Deutsche Med. Woch., 1903, vol. xxix, No. 42.

SONNENBURG says he has seen the cases of appendicitis increase very much during influenza.

From a list of 28 or more cases known to me, the following are a few, briefly stated, representing the types seen:

CASE 1.—Italian girl, 13 years old, had a well-marked attack of influenza, which was followed within four weeks with an acute attack of appendicitis. Operation revealed abscess. Culture showed many bacteria, chiefly the colon bacillus.

CASE 2.—Young lady, 23 years of age, severe attack of influenza, followed within six weeks with an attack of acute appendicitis. Operation during the attack. No culture taken.

CASE 3.—Young man of 26, an attack of influenza, followed within six weeks with acute appendicitis. Case improved; no operation.

CASE 4.—Young man of 22, severe influenza, followed within three weeks with apendicitis. Operation; gangrenous appendix. No culture.

CASE 5.—Dentist, 35 years of age, three attacks of influenza within the past two years, each followed by what is supposed to be a catarrhal attack of appendicitis, two of which attacks, the first and third, occurred during the first week of convalescence, while the second, or other attack, during the influenza.

Before concluding, I wish to introduce the thought, which may or may not be new, that influenza occurs in both acute and chronic forms, clinically speaking. I feel sure I have observed cases of the pulmonary type which have gradually passed from the active stages of the former to the more fixed and stubborn conditions of the latter, but which subsequently underwent changes that led to improvement, and in some, to the entire restoration of health. I have also observed a class of cases, even more chronically inclined, in which tubercular evidences became manifest and death laterally ensued. Whether the results in these may be due to influenza primarily, and tuberculosis secondarily, or vice versa, I am not prepared to state, but reasoning from analogy, since we recognize three types of influenza, viz., cerebral, pulmonary and gastrointestinal, doubtless like conditions will apply to them all. Then if we admit the above, e. g., the existence of chronic pulmonary influenza, is there any good reason why we may not so classify the gastrointestinal inflammatory diseases, which succeed to or immediately follow intestinal influenza? If this be admitted, we are but a short way from the admission that this preparatory, influenzal enteritis (of which we are occasionally beginning to hear, and about which it is being said that so far as influenza is the perverter of function and disturber of vital force, it becomes a causative factor in the production of appendicitis), is no more or less than admitting the existence of chronic intestinal influenza, which may involve alike the appendix and the small and large intestines, but the former being peculiar in anatomic construction, composed largely of lymphoid tissue, poorly supplied with arterial circulation, with a natural tendency to atrophic change, at once becomes more vulnerable to the specific infection and less capable of resisting the toxic invasion; hence in this, as in the other parts of the body, we note changes more disastrous to the structure involved, farther reaching in the consequences entailed, and more fatal in the results that follow.

CONCLUSIONS.

Whether the foregoing suggestions and abstracts will enable us to arrive at a fixed conclusion or not, does not affect the following deductions:

1. That appendicitis has increased in the past five years much more rapidly than in either of the previous five-year periods studied.

2. That the accessory cavities are more frequently attacked, and when diseased, more likely to be aggravated by influenza, than by other diseases.

3. That there is more than a possibility of the existence of chronic intestinal influenza, therefore a probability of its causative relation to appendicitis.

4. That the observations as set forth in the abstracts referred to must be admitted as a measure of proof in favor of the inferences drawn and the conclusion arrived at.

DISCUSSION.

DR. DELANCEY ROCHESTER, Buffalo.—During the last fifteen years the number of cases of appendicitis reported has increased; while this is true to a certain extent we must remember that a large number of cases have not been reported previously because they were not recognized. Of late, cases of appendicitis have been more and more recognized and have been reported because operated on. Formerly they were reported, when reported at all, under the heading of "inflammation of the bowels." This may account for some of the increase of cases of appendicitis. I take issue with the doctor in regard to the great increase in the number of cases of appendicitis, but particularly with the statement made regarding the large number of cases of influenza during the past five years, comparing them with the number of the preceding five years. In my personal experience in influenza it has been vice versa. A great many cases have been called influenza which should not have been so designated.

DR. JAMES J. WALSH, New York—Grippe appeared in this country in 1889, 1890 and 1891, and just after that attention was called to cases of appendicitis and possibly the connection between the two begins there. Whether there have appeared more cases of appendicitis during the last five years than previously must be determined from the statistics taken from hospitals or other reliable sources. It may be that trouble in the appendix may have existed for years, and something was necessary to give the disease a shove and influenza seems to be looked on as the cause.

DR. A. E. RUSSELL, Philadelphia—One point that should be noted is that cases of appendicitis which follow the abdominal type of influenza follow a comparatively uncommon type; the catarrhal type is by far the most frequent and the neurotic type comes next in frequency. It seems to me that now influenza is taking the place that malaria held a few years ago prior to the discovery of Laveran's organism. Years ago every vague case was diagnosed malaria; nowadays malaria is one of the most uncommon diseases in Philadelphia. It is so rare there that I would go quite a distance in order to have a case to demonstrate before my clinic. I believe we have had but little influenza to deal with during the past two or three years. Personally I know of 67 cases reported, with the clinical diagnosis of influenza in which no Pfeiffer bacillus was found in the Philadelphia and Howard hospitals last winter. Pfeiffer's bacillus is easily found.

DR. ROBERT T. MORRIS, New York—Dr. Marvel is in a position to see a great many of these cases, because we send our influenza patients to Atlantic City for recuperation. Does influenza cause appendicitis? Yes. It causes a swelling of the mucosa and lymphoid layers of the appendix. Anything causing a swelling of the mucous and lymphoid layers of the appendix leads to the second stage in the production of appendicitis, namely, a compression anemia of the structures which are unable to swell freely in the tight sheath of muscularis and peritoneum of the appendix. The third stage in progress begins when bacteria attack the tissues that have become anemic by compression and later stages of appendicitis follow, their character depending on the character of the resistance that the patient is able to call out. Some cases of appendicitis appear in evidence early in the attack of influenza, and others as late sequelæ. Chronic appendicitis is apt to show an exacerbation also, when the patient's general cell resistance is lowered by the influence of influenza. On general principles we may be very sure that an epidemic of influenza carries an epidemic of appendicitis in its wake, but particularly in the class of cases in which the bowel mucosa is involved, and in which the swelling of the mucosa and lymphoid layers of the appendix is mechanically obstructed by the inelastic sheath of muscularis and peritoneum.

DR. PHILIP MARVEL—If there were as large a number of cases of appendicitis in the first period of five years considered, as in the second, and in the third and last, not recognized as appendicitis or as peritonitis or any other abdominal disease, then surgery has been of little or no help to us in treating this disease. You will note that only five cases were recognized in the first period referred to, hence to conclude that appendicitis is not met much more frequently laterally than formerly, or that the surgical treatment of this disease has been a detriment and not a help is to take a position opposed to facts and that maintained by the profession in general. If we consider all the cases of inflammatory diseases of the abdomen, reported in the first period mentioned and compare the number with the number of cases of appendicitis operated on in the same hospital any single year, during the past or third period, you will find the number of the former about one-fifth of the latter, or that there were nearly five times as many cases of appendicitis operated on in the Episcopal or Pennsylvania hospitals any year since 1900 to the present, as were recognized and reported, of all inflammatory diseases of the abdomen, including abscesses, peritonitis, etc., during the first period of five years referred to. These figures will bear close studying. Referring to the Pfeiffer bacillus as the causative factor, this I have not questioned where there is a pure culture, but as referred to in the early part of my paper you see only a very few of these cases. They are mostly mixed infections—i. e., complex in origin.

NOTES ON VACCINE.*

CHARLES T. McCLINTOCK, M.D., PH.D.
DETROIT.

Most of the observations recorded in this paper are not new. The literature on vaccine contains such a diversity of statements, in regard to its reactions and limitations, that one is often at a loss to know just what to believe in regard to a given statement.

EXPERIMENTS.

The following experiments were undertaken in order to satisfy myself in regard to the various reactions mentioned:

EXPERIMENTS ON CALVES.

A heifer about three months old was fed per os six ounces of an emulsion of active vaccine. Ten days later there were observed a few large, typical, umbilicated vesicles on the legs in the region of the groin and around the udder.

A heifer was injected intravenously with 5 c.c. of an emulsion of active vaccine. Nine days later a large number of well-developed vesicles were discovered in the region of the injection, on the opposite side of the neck, on the edge of the eyelids, in the groin and especially thick over the udder.

A heifer was fed 5 c.c. of an emulsion of active vaccine in a capsule. The capsule was broken in the mouth of the animal. Nine days later a large number of vesicles had developed on the mucous membrane, especially on the roof of the mouth and the inner aspect of the upper lip.

A female calf, six weeks old, weight 130 pounds, was injected intravenously with 5 c.c. of an emulsion of active vaccine. At the time of inoculation the abdomen was shaved. Five days later numerous papules appeared on the shaved portion of the abdomen. Four days later, or nine days after inoculation, typical umbilicated, well-developed vesicles appeared all over the body, on the under side of the upper lip, the external side of the lips, around the eyes, at the base of the ears, on the inside of the nostrils, around the point of injection, on the legs just above the junction of the hoof and the external genitals.

Two calves, A and B, each weighing 130 pounds, six weeks old, diet milk. Abdomen shaved.

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* Read at the Fifty-fifth Annual Session of the American Medical Association, in the Section on Pathology and Physiology, and approved for publication by the Executive Committee: Drs. V. C. Vaughan, Frank B. Wynn and Joseph McFarland.

A received 5 c.c. of an emulsion of active vaccine intravenously.

B received 5 c.c. of an emulsion of active but weak vaccine intravenously.

Five days later A showed a large number of well-developed typical vesicles over the anterior portion of the shaved surface, in the groin, on the leg, and the area around the point of injection. B gave no indication of a reaction. A developed 2 degrees C. more temperature than B.

A heifer was injected intravenously with 5 c.c. of an emulsion of active vaccine. Nine days later two well-developed vesicles appeared near the point of injection. Fifteen days after injection animal was inoculated in the usual manner and found to be immune.

A heifer was sprayed in the nostrils with an aqueous emulsion of active vaccine. Six days later vesicles were observed in the region of the udder.

A heifer, pregnant, was sprayed in the nostrils with an aqueous emulsion of active vaccine. Six days later vesicles were observed along the back and on the legs. Animal gave birth to a calf three weeks after inoculation. The calf at birth reacted to vaccine.

A heifer, pregnant, inoculated with vaccine in the usual way. Animal gave birth to a calf on seventh day after application of vaccine. Vaccine well developed. Calf gave good reaction to application of vaccine.

The vaginal wall of each of three heifers scarified and vaccine applied. In about five days thickened and white patches appeared along the lines of scarification.

The lower bowel of each of two heifers was thoroughly washed out with warm water. Several ounces of an emulsion of active vaccine injected. No reaction.

Two cubic centimeters of an emulsion of active vaccine injected subcutaneously in a heifer. Abdomen shaved and scarified. Gave no reaction.

A heifer was inoculated in the usual manner on the skin with blood drawn from a heifer that had reacted well to vaccine. No reaction followed.

EXPERIMENTS ON RABBITS.

In order to see if rabbits could be used for determining the activity of commercial vaccine, fifteen different samples of vaccine were used on forty-eight rabbits. Of these two died, four gave no reaction, ten gave a redness of the inoculated skin only (this redness is a partial reaction and is not due to the shaving or scarifying of the skin), seventeen gave distinct but poorly-developed vesicles, while fifteen gave the typical vaccine lesions.

In this series of rabbits it was very noticeable that the large, full-grown animals reacted much better than the smaller and younger animals. Since the above was written, many rabbits have been used in this way, and in our experience we find the results are most satisfactory if the back of the animal is used rather than the abdomen, if a small area is shaved, and the vaccine rubbed in without scarification. In judging of the quality of the vaccine, we very much prefer to use the skin of the back of the rabbit rather than the corneal inoculations.

EXPERIMENTS ON GUINEA-PIGS.

Eighteen mature male guinea-pigs, inoculated on the scrotum with nine different samples of active vaccine. At the end of four days all of them had reacted, but the lesions were far from uniform in number or size; they varied from a very slight reaction to typical, well-formed vesicles.

The reaction of vaccine on the scrotum of guinea-pigs was carried through eighteen generations. Since this was written (about a year ago), between 2,000 and 2,500 guinea-pigs have been used in testing vaccine. We find that the guinea-pig is the most satisfactory small animal for testing vaccine and judging of its value. I am of the opinion that with proper technic they will react with as much certainty and uniformity as do children or calves, but it is quite noticeable that the older animal gives the better results.

EXPERIMENTS ON DOGS.

Two dogs were fed a quantity of an emulsion of active vaccine. No eruption.

A dog was injected intravenously with an aqueous emulsion of active vaccine, and gave at the end of eight days a general eruption of modified vesicles.

A dog, shaved over abdomen and injected intravenously with an aqueous emulsion of active vaccine, developed vesicles over shaven area and at point of injection seven days after the operation.

Six dogs, shaved on the back, scarified and inoculated with commercial vaccine, developed modified vesicles at the end of eleven days.

EXPERIMENTS ON VARIOUS ANIMALS.

Several typical, well developed vesicles were collected from a heifer producing commercial vaccine. Two full-grown rabbits were inoculated on the back with this material. Animals developed vesicles and redness; at the end of the fourth day material removed and inoculated onto the skin of a dog. This animal developed vesicles. At the end of the eleventh day material removed and inoculated onto scrotum of two guinea-pigs. Vesicles developed and were removed at the end of three days. Material collected and inoculated onto skin of a heifer. Typical vesicles developed in six days.

Inoculation of vaccine on cornea of rabbits through thirteen generations. Transferred to the skin of a heifer, gave typical vaccine vesicles for that animal.

Vaccine inoculated on the cornea of frogs produced a cloudiness and growth similar to that on cornea of the rabbit. Transferred to the scrotum of guinea-pigs we obtained typical vesicles for that animal.

Six white rats, shaved on abdomen and inoculated with an emulsion of active vaccine. Gave no reaction. Some observers report having obtained good results from white rats.

Six white mice, shaved on abdomen and inoculated with emulsion of active vaccine, gave no reaction.

Two cocks, inoculated on the skin of the breast after removal of feathers, failed to give reaction. Two pigeons treated in a similar manner failed to react.

A spot was shaven on the rump of a donkey, an emulsion of active vaccine was applied, and a raised greasy growth developed and persisted for several days.

A spot was shaven on the abdomen of a horse, active vaccine was applied and an appearance obtained similar to that on the donkey, which persisted for several days.

The abdomen of a young female goat was shaven and active vaccine applied. Small, discrete, non-umbilicated vesicles appeared in six days.

The rump of a mature male goat was shaven and active vaccine applied. Small bleb-like vesicles appeared in six days.

A spot was shaven on the backs of two sheep, active vaccine applied and in six days bleb-like vesicles developed.

The backs of two swine were shaven, active vaccine applied, and a scale formed, but no vesicles.

Some active vaccine was digested in neutral solution at 38 degrees C. with the following enzymes: Pancreatin, caroid, bromolene. At the end of forty-eight hours the different solutions inoculated on the skin of a heifer in as many different spots. Some of the original vaccine inoculated as control. Pancreatin solution, no reaction; caroid solution, no reaction; bromolene solution, a few vesicles; control solution, numerous vesicles.

An emulsion of active vaccine was centrifugated for ten hours, at the end of which time the supernatant liquid was removed and inoculated on the skin of a heifer, together with some of the original emulsion as control. Both spots reacted equally well.

An aqueous emulsion of active vaccine was dried in a current of cold air. One-half was ground to an impalpable powder in an agate mortar. Each lot again emulsified. The

dried unground material developed the usual number of typical vesicles for the area scarified. The ground sample failed to react.

Plain agar at 45 degrees C. inoculated with sterile vaccine, then injected under the skin on the abdomen of a heifer. Agar solidified by placing ice over site of injection. After five days agar removed, examined microscopically and inoculated on skin of normal heifer. No result. Experiment repeated with several animals.

Collodion sacs inoculated with sterile active vaccine and placed in abdomen of rabbits and heifers. Sacs removed at varying intervals of time, and inoculated on skin of normal heifer. No result. Collodion sacs, inoculated with sterile active vaccine introduced into scrotum of male guinea-pigs, after removal of testes, after several days gave no reaction when applied to susceptible animals. The same results were obtained from sacs placed under the skin of heifers.

Eggs inoculated with sterile active vaccine in different ways, i. e., in the albumin, in the yolk, in the whole contents shaken up, in eggs coated with paraffin, placed at room temperature, incubator, and icebox. Microscopic examination and inoculation on the skin of a heifer gave no result.

Some capillary tubes of commercial vaccine (50 per cent. glyc.), were subjected to the following conditions:

1. Three tubes placed in water at 50 C. for 5 min.
2. Three tubes placed in water at 50 C. for 10 min.
3. Three tubes placed in water at 50 C. for 15 min.
4. Three tubes placed in water at 60 C. for 5 min.
5. Three tubes placed in water at 60 C. for 10 min.
6. Three tubes placed in water at 60 C. for 15 min.
7. Three tubes kept for control.

Each tube was then inoculated on the scrotum of a mature male guinea-pig; at the end of the fourth day there were the following results:

1. Good reaction on three pigs.
2. Good reaction on three pigs.
3. Fair reaction on one pig; poor on two.
4. No positive reaction.
5. No positive reaction.
6. No positive reaction.
7. Good reaction on three pigs.

Serum obtained from heifer immune to vaccine used for precipitin reaction, using an aqueous emulsion of active vaccine filtered through paper. No reaction.

A physician of considerable experience reported that he had great difficulty in vaccinating children who had recently had an injection of antitoxin. In order to test the matter, two vaccinated heifers were given daily large doses of diphtheria antitoxin, but there was no apparent delay in the development of the vaccine. Vaccinated heifers were also treated with quinin and methylene blue, with no observable effect on the development of the vaccine.

One set of vaccinated guinea-pigs, that were given per mouth large doses of sulphur, seemed to show marked inhibition in the growth of the vaccine.

An attempt was made to see if we could find some drug or chemical that had a peculiar or selective action on the vaccine organism, such as quinin for malaria or mercury for syphilis. As the results were practically all negative, it is not necessary to give the details of the experiment, which would make this paper too long. The drugs were mixed with fresh calf vaccine, and after certain varying lengths of time, the vaccine was inoculated on scrotum of adult guinea-pigs. The following list of drugs in the per cent. used did not destroy the vaccine:

Borax, boracic acid, sodium sulphite, sodium salicylate, sodium arsenite, arsenous acid, tannic acid, carbolic acid, carbonic acid, ammonia alcohol (3 per cent.), camphor, guiacol carbonate, oil sandal wood, oil eucalyptus, oil peppermint, olive oil, infusion ipecac, hydrogen sulphid, glucose, dextrose, lactose, eosin, methylene blue, methyl violet, quinin hydrochlorate, cocain, caffein, aconitin, pilocarpin hydrochlorate, apomorphin hydrochlorate, atropin, morphin sulphate, strychnia sulphate, chloral, chloretone, antipyrin, salicin, salol, phlorogucin, potassium iodid, barium chlorid, calcium chlorid, ammonium chlorid, potassium bromid, potassium bitartrate.

The following list of drugs did either destroy or materially weaken the vaccine, but I do not believe that it was any specific action at all. Most of them, it will be noticed, are protoplasmic poisons:

Potassium carbonate, sodium carbonate, potassium dichromate, potassium alum, copper sulphate, iron sulphate, lead acetate, ferric chlorid, zinc sulphate, chloroform, ether, urotropin, turpentine, kerosene, ichthyol, oil cinnamon, mercuric chlorid (1-10 to 20,000), nitric acid, hydrochloric acid, sulphuric acid, phosphoric acid, acetic acid, oxalic acid, citric acid.

(These last seven acids in dilutions of 1-1000 to 1-2000.)

ATTEMPTS TO GROW THE VACCINE ORGANISM.

Fresh active vaccine with the bacteria destroyed, usually by chloretone, sometimes by carbolic acid, were inoculated on or into the media. This was incubated for varying lengths of time, and the material then tested on guinea-pigs. Not infrequently there was a growth of vaccine on the animal, but one experienced in this line can usually tell at a glance as to whether this growth is a transference of a portion of the vaccine inoculated on the media, or whether there had been a multiplication of the vaccine organism. In no case was there proof of the latter.

In addition to the ordinary culture media of the laboratory, the following were tried, all results being negative:

Bouillon from fish and from fish skin; milk whey; bouillon from the skin of frogs, guinea-pigs, cows, rabbits, heifers; fresh blood serum from rabbits, cows, horses; blood serum from same animals plus a small amount of hemoglobin; blood serum from the same animals heated at 60 degrees on each of several days; skin of rabbits, guinea-pigs and heifers partly digested with pepsin, and then made alkaline: skin from rabbits, cows and guinea-pigs sterilized by chloroform or chloretone, which was removed by heat, and then the skin inoculated; infusion made from vesicles of a heifer after sterilization; infusion made from cabbage, carrots, turnips, beets, Irish and sweet potatoes. Reaction alkaline, acid and neutral.

THE VACCINE ORGANISM.

After three years of continuous work, attempting to gain some insight into the form or nature of the organism causing vaccinia, my results are entirely negative. The number and variety of forms to be found in vaccine—forms that may possibly be the specific organism—is surprising. I have been called so often by my assistant to come and see a new organism that it has grown monotonous. The forms described by the several authors who have reported on this subject during the last ten years are all to be seen at times, as well as many others. The ones recently described by Councilman, Caulkins and their co-workers are easily made out, but that these or any of the others so far described have anything to do with causing the phenomena of vaccination, as it appears to me, is without any satisfactory or substantial proof.

CONCLUSIONS.

1. Many of the domestic animals are susceptible to smallpox vaccine.

2. The time of development varies notably, from three days in a guinea-pig to from nine to eleven days in a dog. This variation appears to depend on the resistance of the animal, and apparently does not increase or decrease the virulence of the vaccine. Vaccine grown for seventeen generations on guinea-pigs, where it develops in three to four days, when inoculated on heifers or dogs, takes the usual time for development in those animals.

3. In guinea-pigs and rabbits, full-grown animals are decidedly more susceptible than young ones.

4. Vaccinal immunization in cattle is not to any notable extent transmitted to the fetus.

5. A great many chemicals have a destructive or germicidal action on bacteria, but in the list of chemic-

als thus far tried, none have been found which show any special or specific action against the vaccine organism.

6. The vaccine organism is not killed by glycerin, chloroform, chloretone, potassium cyanid, carbolic acid or quinin, when these chemicals are not used in too great strength. At the same time all the ordinary bacteria, contaminating the vaccine, are destroyed.

7. Contrary to the opinion of many observers, we have not found that the vaccine organism decreases in virulence by repeated inoculation on calves. At one time we carried a strain of vaccine through eighteen generations on calves in eighteen weeks, destroying the bacteria in the vaccine with chloretone before making each inoculation. At the end of the time there was no apparent loss of virulence.

NOTE.—Umeno reports 130 generations on calves with an increase in virulence.

DISCUSSION.

DR. M. J. ROSENAU, Washington, D. C.—Did Dr. McClintock state that the use of glycerin, chloroform, chlorodin, potassium cyanid and carbolic acid killed all the bacteria in vaccine and did not harm the power of the virus so far as its physiologic action is concerned?

DR. D. H. BERGEY, Philadelphia—Some three years ago I took up the study of vaccinia for a brief time and conceived the possibility of the cultivation of vaccine virus in some of the lower animals, the method being probably somewhat less expensive than that at present in use and also less open to danger of extraneous infection. I made my experiments in the peritoneal cavity of the guinea-pig; but my experience coincides with that of Dr. McClintock—that the virus died out or the organism disappeared in a few days, and my results were entirely negative.

DR. A. P. OHLMACHER, Gallipolis.—I should be very much pleased to have a few words of information as to the results of the attempts to grow the vaccine organism.

DR. CHAS. T. MCCLINTOCK—Answering Dr. Rosenau's question, in my opinion all these agents that kill the bacteria in vaccine weaken it, some more than others, doubtless, but I think they all harm it to a certain extent. An apparent contradiction to this will be noticed. Better takes result from vaccine that has been several weeks in glycerin than from the same vaccine when used just after it is removed from the animal. This is doubtless due to the destruction of the bacteria present, and possibly to the dying out of the weak vaccine organisms, so that in the vaccine kept for several weeks only the vigorous resistant organisms are present. None of the agents mentioned will destroy the spores of bacteria should they be present in the vaccine. Answering the question of Dr. Ohlmacher, after trying all ordinary laboratory media, I made a large number of experiments, using the skin of the several animals that are susceptible to vaccinia. I used this skin in every way that I could conceive of. I also used the various organs of the susceptible animals, but in all cases without results.

Another Case of Suture of Wound in Heart.—An interne at a Paris hospital, R. Lemaitre, was summoned to a man who had just been brought in with two stab wounds in the heart, apparently moribund. Lemaitre made a U-shaped incision, the base of the flap outward, the upper line in the second interspace, with disarticulation of the ribs. Passing his hand under the heart, he raised it and closed the wound with his thumb, taking three stitches and thus arresting the hemorrhage. He then replaced the heart in the pericardium, wiped it and freed it from clots. The entire operation was complete in thirteen minutes. The third day thereafter an infectious pleurisy developed to which the patient succumbed. The *Gazette Médicale de Paris* for April 30 reports the case, commenting especially on the prompt decision and intervention of the young surgeon.

PROFESSOR KITASATO'S PRESENT WORK.*

DR. MIAJIMA.
Expert of Lymph Institute, Department of Interior.
TOKIO, JAPAN.

Under the direct supervision of the Minister of Interior, there now exists in Japan three institutes of an allied nature, namely, the Institute for Infectious Diseases, the Serum Institute, and the Lymph Institute, of which the founder and present director is Professor Kitasato, a name so well known to the world associated with that of the famous Professor Koch. The Institute for Infectious Diseases is especially designed for investigating the causes of infectious diseases, and the other two are the factories where are prepared several kinds of remedies for public demands. A brief sketch of these three institutes may perhaps be found interesting to you.

Permit me, before proceeding on this subject, to digress for a moment.

In the Philippine Islands several dangerous diseases are prevalent throughout the year, plague, cholera, dysentery, malaria, etc., from which many thousands of American people have already suffered and died. You know too well that these new dominions of yours are so far from their motherland that governmental aid can not easily reach them, especially from a hygienic point of view. Remedies such as serum and vaccine do not long preserve their curative powers, and their virtues are materialy lessened during their long and tedious transit to those islands. For these reasons the serum and vaccine for your Philippine possessions are mostly supplied from our institute. I can not here give you accurate statistics of the serum exported to the Philippines, because it is too extensively sent out through both official and private channels. It is certain, however, that the official orders amount yearly to at least 10,000 bottles of serum. Our institutes are thus working for not only the good of the Japanese, but also for the good of the American people. This fact shows clearly that the results of recent medical researches are a blessing to humanity in general.

In the Chino-Japanese war we know that the loss of lives was mostly caused by diseases—cholera, dysentery, typhus, smallpox, etc. In time of war, therefore, we men of medical science ought to fight these most dangerous of enemies, not only of Japan, but of humanity at large. Here we use not the gun nor the sword, but instead serum and vaccine. Now that the Russo-Japanese war is in progress, Professor Kitasato, the hero of medical science in our country, is very busy with his assistants in taking preventive measures against the outbreak of infectious diseases which are an inevitable consequence of a war.

HISTORY.

Professor Nicholas Senn, one of the most famous surgeons in this country, said: "The crowning point and the pride of medical science in Japan is, and should be, the Imperial Hygienic Institute, which was founded and is directed by Professor Kitasato."

Professor Kitasato, president of our institutes, is a graduate in medicine in the Tokio Imperial University. After his graduation he was sent by the government to Germany to perfect his life-work (bacteriology). For four years and a half he worked in Koch's institute. During his stay in Germany he made many valuable

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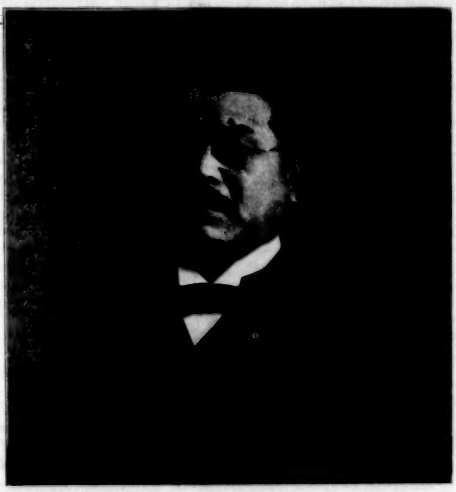
* Read at the Fifty-fifth Annual Session of the American Medical Association, in the Section on Pathology and Physiology, and approved for publication by the Executive Committee: Drs. V. C. Vaughan, Frank B. Wynn and Joseph McFarland.

discoveries, one of which has made his name immortal, namely, he succeeded in obtaining a pure culture of the tetanus bacillus. As a consequence of this discovery the emperor of Japan granted him a scholarship by way of encouraging him to continue the investigation of this new branch of medical science. Before he left Koch's institute several foreign universities offered him a professorship. But he declined those honorable offers from his patriotism and desire to establish this new branch of medical science in his own country. After returning to Japan he set to work to found an institution for the investigation of infectious diseases, but at the time the public was not yet prepared to respond to Professor Kitasato's appeal sufficiently to allow of his seeing a speedy fulfillment of his desire. The late Mr. Fukuzawa, a leader of new education in Japan, volunteered to erect a new laboratory and to defray all the expenses needed for its maintenance. When the Hygienic Association of Japan took up the matter, Mr. Fukuzawa granted the association the free use of his newly constructed building and lands appertaining thereto. Thus the institute, with Professor Kitasato as its president, was opened Nov. 30, 1892. Several philanthropic persons, both foreign and Japanese, showed their sympathy and interest in our work by making contributions. The available funds, however, were soon found to be inadequate, and the government granted 20,000 yen for building purposes, and 15,000 yen to cover the running expenses for three years. A new grant was made later to cover a subsequent three years. In April, 1899, it was made a national establishment.



PROFESSOR KITASATO.

In 1894, soon after the establishment of the institute, the plague broke out in Hongkong. Our government commissioned Professor Kitasato and his co-workers to go there to investigate the cause of this disease, of which, up to that time, we had no practical knowledge. A few days after his arrival there he discovered the existence of the microbe, the direct cause of this disease. This discovery made him one of the greatest bacteriologists in the world.

Professor Kitasato is, as Professor Senn said, "an indefatigable worker, and knows nothing but work." His keen eye recognized the necessity of a state serum manufacturing institution where an ample supply of good serum could be procured at lowest possible price. Acting on his advice, the Central Hygienic Society, in 1895, made a representation to the Minister of Interior to establish a government serum institute, and the following year the present Serum Institute was founded by Professor Kitasato and has since that time remained under his control.

The first lymph institution ever establish in Japan was founded by the government in 1879. Afterward, however, it was transformed into a private institution, the consequence being that inferior lymph was produced by irresponsible persons; whereupon, in 1896, the government established two lymph manufactories, one in Tokio and the other in Osaka, to supply a good lymph at the lowest price. Professor Kitasato was elected president; but in consequence of the improved manufacture of the lymph, the Osaka institute was soon closed, and now only the Tokio institute is producing lymph for the general use of the entire country.

ORGANIZATION.

Institute for Infectious Diseases.—The work of this institute is divided into three departments: 1. To investigate the causes of the infectious diseases, the methods of their prevention, and to furnish sanitary officers with necessary materials and knowledge in dealing with these diseases. 2. The hospital, in which there are about 70 beds which furnish materials for experiments and the opportunity of testing various diseases. 3. A lecture course for those physicians who wish to equip themselves with a thorough knowledge of bacteriology. The average number in a class is eighty. Each course extends over three months, and the tuition fee is small. Already about 2,000 physicians have finished their course and are distributed all over the country. This department is also devoted to the investigation of the materials to be used for medical purposes and examination of those things brought in by the public for investigation and inspection.

For the purpose of carrying on the above-described work three chief instructors are appointed, namely, Dr. T. Kitashima, G. Shibayama and Prof. N. Asakawa, who have under their direction a total of twenty-five assistants.

Many sanitary officers of different prefectures, as well as military and naval surgeons, are taking special studies in this institute.

Foreign physicians, too, are often found among our laboratory students.

The Serum Institute.—Dr. S. Hada, Dr. Teruuchi and Dr. Kitashima, with seven assistants, superintend the production of blood serum and vaccine.

The Lymph Institute.—The lymph manufacturing department is under the direction of Profesor Kitasato; Veterinary Surgeon Mr. Umeno and myself are superintending the work, with ten assistants. The yearly appropriation for our three institutes is about 18,000 yen.

WORKS.

The aim of our institute is, as stated above, on one hand to investigate the causes of diseases and ascertain prophylactic and curative methods for the same, and on the other hand to supply the most effective remedies against each kind of disease. Our work, therefore, is many-sided. In the following I will describe the result already obtained by our experiments, and at the same time explain the nature of the serum and vaccine which are manufactured in our institutes.

DIPHTHERIA.

Diphtheria is a most prevalent disease, of which serum treatment was discovered conjointly by Professors Kitasato and Behring in 1892. For the first time the serum prepared in our institutes was applied to patients in November, 1894. From that time until August, 1903, it was tried on 4,556 persons, out of whom only 480 died; that is, the rate of mortality is 10.5 per cent. Thus the favorable result shown in the statistics of the world is also confirmed by the experiments of our institute. Since the opening of the institute, August, 1896, a large quantity of diphtheria serum has been supplied.

Previous to the sale of serum the death rate of diphtheria patients was 50 per cent.; but it has since gradually decreased to 38 per cent. in 1894, 36 per cent. in 1897, and finally to as low as 28 per cent. in 1902. What a great blessing is the serum treatment to the human race! In the earlier stages of making serum it contained only 100 u. in 1 c.c., but gradually a more powerful serum was produced. This is largely because a stronger toxin has been obtained and the method of immunization has been improved. The serum sold at present contains 500 u. in 1 c.c. Last year the sale of solidified serum was begun, as it may be kept in that form for a longer period. The kinds and prices are as follows:

	Units.	Quantity.	Price.
Bottle No. 1. liquid	500	1¼ c.c.	$ 60
Bottle No. 2. liquid	1,000	2 c.c.	1.00
Bottle No. 3. liquid	1,500	3 c.c.	1.50
Bottle No. 4. solid	5,000	10 gr.	5.00

PLAGUE.

Since the discovery of plague bacillus in Hongkong in 1894, Professor Kitasato has realized after long experiments the advantage of serum therapeutics and prophylactic injection. Fortunately, the result of his researches has been of great benefit to our country. In November, 1899, the plague broke out in Kobe and Osaka, and about sixty persons contracted the disease. It seemed to have been exterminated by January of the following year, but it broke out again in April, indicating signs of further spread.

In countries that are situated as is Japan, and that carry on direct communications with the seaports of India and China, it is necessary to be always on guard against the introduction of this malignant contagion. Consequently, the pest laboratory was built in accordance with the dictates of past experiences and latest scientific theories, because much greater caution and a more complete equipment with the bacillus of this most dangerous disease is needed than with the bacillus of other diseases. Under the supervision of Dr. Hada this laboratory in 1901 began to make the blood serum and vaccine. In the same year the pest serum was tested in the Tainan Isolating Hospital, adopting the so-called alternative method, i. e., the odd numbers of cases were injected with serum only, the even numbers receiving no injections, but early extirpation of infected glands and general systemic treatment. The results of these tests were as follows:

	No. of cases serum treatment.	No. of cases non-serum treatment.
Cured	37 (66 per cent.)	21 (37.5 per cent.)
Died	19 (9 per cent.)	35 (62.5 per cent.)
	56	56

The death rate of non-serum treatment of plague in the same hospital from 1868 was 54.06 per cent.—60.68 per cent.

By serum treatment the death rate is rendered very low, showing a great improvement over any other method of treatment. From 1900 to 1903 the amount of serum, both sold and distributed free, was 3,777 bottles.

The pest vaccine is also prepared for prophylactic purposes. The quantity of vaccine to be used differs with age. In first instances of inoculation from 5 to 10 and in the second 10 to 30 c.c. is injected under the skin. The number of persons who received this treatment in Formosa and Osaka is no less than 200,000. It was very rare for persons who received this treatment to contract the disease. It should, therefore, be reckoned as a preventative method as good against this contagion as the destruction of rats. The total quantity of vaccine used amounted to 14,580 bottles during four years (1900-1903).

TETANUS.

After Professor Kitasato's discovery of the pure culture of tetanus bacillus, the serum treatment was also applied to the patients suffering from this terrible infection. The number of patients treated in the institute from 1897 to 1903 was 74, out of which 41 died, making the death rate 55.4 per cent. In the Serum Institute two kinds of this serum are produced, liquid and solidified, the former containing 10 units in 1 c.c., the latter from 80 to 100 units in 1 gr. A quantity of serum containing 100 units is used for prophylactic treatment, either when wounds show signs of tetanus, or when a surgical operation has been performed. For curing one patient 40 c.c. (400 units) of this serum are to be used. One bottle for prophylactic use costs 60 cents; the same for curative use, $2.50, while solidified serum, containing 1,000 units, $6.50. This serum can be used successfully not only for human beings, but also for animals; hence it is now widely used for wounds of horses.

CHOLERA.

When cholera broke out in our country in 1895, in consequence of the Chino-Japanese war, Professor Kitasato undertook the care of the special hospital, and first tried the inoculation of serum. Out of 193 patients, 63 died, the death rate being 33.1 per cent. Compared with the death rate of 70 per cent. in ordinary cases of treatment, this new method is a decided improvement over the old one.

A large number of bottles of the serum were made in the Serum Institute for curative purposes when cholera prevailed in 1902. At that time a large amount of the cholera vaccine for prophylactic purposes was prepared. One bottle of this vaccine is to be used for one person, just once. The patients who receive this treatment feel no serious pain, excepting only a slight fever and a little weariness. So many persons have been inoculated that it would be impossible to collect the exact statistics. But this treatment has undoubtedly lessened the number of otherwise possible victims of the disease.

HYDROPHOBIA.

We make prophylactic inoculations in accordance with

Pasteur's methods. Our former assistant, Dr. Oshida, improved the method of injecting the virus into a rabbit. The injection is made through the optic foramen beneath the dura mater. He also simplified the method of extracting the spinal cord, by opening the spinal canal in two places, back of the neck and over the loin. The cord extractor, a long metal rod, furnished at the distal end with an olive point, is inserted through the lumbar opening, and the severed portion of the spinal cord is pushed out through the cervical opening. Four hundred and twenty-eight persons came to receive our treatment during the last seven years. Of these only two had a relapse after inoculation. One was sent to the institute eight days after the accident, and on the eleventh day after the completion of the treatment he had a relapse and died seven days afterward. Another had a relapse during the process of inoculation, and died. Strictly speaking, therefore, there has been only one case in which the patient really had a relapse, for the second case mentioned died before the completion of the treatment. Hence the percentage of death is 0.24.

DYSENTERY.

Dysentery prevailing in Japan proper and other countries of the temperate region is different from the amebic dysentery of the tropics. Its bacillus was discovered in 1897 by Shiga, one of our former departmental chiefs, who is now studying in the laboratory of Professor Ehrlich in Germany, and it is generally accepted throughout the world to be the cause of the disease. It is a bacillus resembling that of typhoid fever. Antitoxic serum made from this bacillus is exceedingly effective for remedial purposes. According to the result obtained in 1898-1899, there were only 15 deaths out of 165 patients. The rate of mortality was, therefore, 9.1 per cent. At the city hospital the number of deaths being 11 out of 88 patients, the death rate is 2.5 per per cent. against 30 to 40 per cent. of the ordinary treatment. Not only is the merit of this method so apparent in our own institute; it was also tried in different parts of the country with very satisfactory results. Prophylactic inoculation of the vaccine against this disease shows also hopeful signs. We use the vaccine, as in the case of cholera, and inoculate twice, its effect on the patient being more violent than in cholera. We inoculate according to Dr. Shiga's method, vaccine and antitoxic serum at the rate of 50 per cent. in the first instance, and in the second at the rate of 80 per cent. and 20 per cent. By so doing the patient can stand the treatment without sustaining a violent effect. We have already tried prophylactic inoculation on 50,000 persons, and the results have been very favorable. In 1900, for example, dysentery broke out in a little village in Kanagwa, and 28 persons fell sick in the course of a month. All persons in the village above four years of age were required to be inoculated; the result was almost miraculous. With the exception of two persons who contracted this disease on the day after the first inoculation all escaped the grasp of the dreadful contagion. The above remedies are given to patients without charge.

TYPHOID FEVER.

In this case an accurate early diagnosis is very important. For that purpose the pustule serum of the patient under treatment is to be tested for Widal's reaction. Most practitioners in the country can not always obtain the culture of typhoid bacillus. For their convenience, Dr. Asakawa, one of our department chiefs, prepared a diagnostic fluid for typhoid fever, which now in Japan is a great benefit to many of them. For curative and prophylactic purposes the serum and vaccine are also to be used. According to our recent experiment, the serum treatment has been found to be a decided improvement. Only 36 persons died out of 230 patients in our hospital, the death rate being 17.7 per cent. When typhoid fever prevailed in various districts, complete success was obtained in checking by means of prophylactic inoculation of the vaccine.

TUBERCULOSIS.

The cure and prevention of this disease is one of the principal subjects which we are earnestly investigating. It is, however, a source of great mortification that in spite of our efforts in experimenting with Koch's original tuberculin, with new and newest tuberculin which we manufacture ourselves, we have not yet met with complete success. Besides Koch's original tuberculin, Dr. Kitashima prepared a new diagnostic fluid for tuberculosis after long experiment. Other topics for our careful investigation at present are the difference between bovine and human tuberculosis, the merit and demerit of antoxic serum and the effect of prophylactic inoculation.

LEPROSY.

This disease not being rare in our country, demands our most careful study. There is a Christian charity hospital in the suburb of Tokio, with thirty to forty inmates, and its medical direction is entrusted to our care. The cause of this disease has already been discovered by Dr. Armauer Hansen, but no satisfactory method has yet been found for its culture, nor have animal experiments proved successful. Our president, Professor Kitasato, is studying this dreadful disease with merited attention.

His various experiments for prevention and cure of leprosy are progressing favorably. When his work on this obstinate disease is completed, he will make it known to the general public in his usual unselfish way.

MALARIA.

Since R. Ross discovered that malaria is disseminated by a certain kind of mosquito, great advances in this new theory have been made by Grassi, Koch and others. There are many infectious but not contagious diseases which are caused not by the bacilli, but by protozoa, as malaria. For example, surra and trypanosomiasis in Africa are diseases caused by the invasion of blood parasites, called trypanosoma. The former is a disease of the horses, the latter of human beings. Texas fever of cattle and tick fever of men are also diseases of protozoan origin. The cause of the former was discovered by Smith and Kilborn in this country, before the discovery of malaria mosquito theory. The latter was recently reported by M. Downing and L. B. Wilson. Both diseases are caused by pyrosoma, a peculiar parasite of blood corpuscle, and carried over by a small tick.

Those diseases caused by trypanosoma or pyrosoma have a great similarity to malaria in the nature of their germs and in the mode of propagation, while they are widely different from those of bacterial origin. Therefore, such diseases should be investigated in different ways.

Thus the investigation of malaria is a fundamental study in this new branch of bacteriology which is arising at present.

In our country malaria is one of the most common diseases, of which much valuable information has been already published. I have myself devoted four years

to the study of malaria in Japan. According to our own investigation, only one kind of malaria and anopheles seem to exist in Japan proper, while in Formosa three well-defined kinds of malaria and at least six distince species of anopheles are found. In a recent research I demonstrated the fact that certain kinds of malaria are propagated by certain species of anopheles. This means that all species of anopheles is not a carrier of all kinds of malaria. Our experiments proved that anopheles sinensis is the host of tertian malaria parasite, plasmodium vivax, but not of the malignant malaria parasite, pl. precix.

This fact shows, at least, that the malignant malaria is restricted only to Formosa, notwithstanding anopheles sinensis is most abundant in Japan proper.

KAKKE BERRI-BERRI.

This is a common disease of our people, and many lose their lives from it. We have made and are making most careful studies on this most important subject. We keep about thirty patients annually in our hospital for investigation. We are not as yet sure of the mode of propagation of this disease, but it is now beyond question infectious, because in every instance where a sporadic case is discovered it quickly becomes an epidemic.

Poisonous Snakes.—In Japan many species of poisonous snakes have been found. Among them two species are most common, namely, *Trigonocephalus blomhoffi* in the central part of Japan, and *Trimeresurus rinkinanus* in the southern islands. The latter is more poisonous than the former. This snake (Hahn) is very abundant in Rinkin and Oshima, where no less than 300 persons are bitten every year, and one-seventh of this number usually die. On account of this condition of affairs a laboratory was established at Oshima in 1902 for collecting venom. This venom is a thin beautiful flake of yellow color, when dried, and of extraordinay power, as 0.1 gr. kills a horse. The immunization of animals with this venom has enabled us to produce a serum for these snake bites. Therefore, it may soon be offered for public use by the serum institute.

SMALLPOX.

Vaccination is the only prophylactic method against this dreadful disease. The animal lymph is in common use in all civilized nations. It is a well-known fact, however, that the humanized lymph, though it is very powerful, is liable to become the medium of conveying germs of other diseases. On the other hand, the retrovaccine is weak in effective power, though the danger of its transmitting other diseases is much less. It is very important to produce an ideal lymph which, while minimizing the defects of the other two, combines the merits of both. Therefore, the production of lymph without the medium of the human body has long been attempted. The greatest obstacle lay in the fact that, if vaccination was continued from calf to calf, its effective power would become so weakened that it would finally become non-effective. The physicians used to attribute this to two reasons, namely: 1, That the calf's body weakens the effective power of lymph; 2, and that the animal lymph contains a very small quantity of virus or germs. According to our experiments the result is just the other way. We found the cause in the wrong method of inoculation. The main points of our opinion are as follows: The quantity of virus in animal lymph is much greater than in humanized lymph, unless, therefore, it is diluted before inoculation; the very existence of superabundant virus will hinder its growth; the portion of the calf's body inoculated should be small and the vaccine must be carefully nourished. This idea was confirmed by practical experiment; at least, we succeeded in producing lymph without passing through a human body. This non-humanized lymph, therefore, is obtained by inoculating the sufficiently diluted lymph into the belly of a calf over a small surface. It is now nearly four years since the introduction of this method in the lymph institute, and the lymph does not deteriorate or lose its power after passing through 150 calves; rather its effective power has increased. Not only is the lymph of our institute superior to any other kind, but the expense of producing it has been greatly reduced, the price of one lymph tube for five vaccinations being only 5 cents. The total amount of lymph sold during the last five years is 2,742,164 tubes. At present this institute is easily supplying the great amount necessary for the vaccinating of soldiers sent to the battle field. It would be impossible to produce a large amount of lymph for a sudden order if the institute had not discovered the above-mentioned new method of producing the lymph.

DISCUSSION.

DR. W. H. WELCH, Baltimore—May I, in behalf of the President of the Association and all of the members, reciprocate very kindly the expression of feeling which Dr. Miajima uttered at the beginning—what pleasure it gives to us and all of his colleagues in this country to have him here, and how much we appreciate and admire the work of his chief and associates and others in Japan.

His observation is one of extreme interest—a very valuable contribution, it seems to me, to our knowledge of malaria; nothing less than a demonstration of the fact that there are certain species of mosquito capable of conveying only one of the many varieties of malarial parasite. May it not be that these differences in the types of malaria depend on the intermediate host—on the particular mosquito which conveys the parasite? There may be properties, biologic characters, implanted on the parasite through the host and the only reason that the estival or autumnal parasite in this latitude does not produce, or only exceptionally produces malicious forms of malaria is because the mosquito conveying it in this latitude is not the same as the mosquito conveying it in tropical countries. It strikes me as so important and interesting an observation that the Association is also to be congratulated as the medium through which Dr. Miajima has made the communication.

THE LOCAL USE OF QUININ IN HAY FEVER.

HENRY D. FULTON, M.D.

PITTSBURG, PA.

So many remedies have from time to time been proposed for the relief of hay fever that doubt has arisen as to the value of any of them, and very naturally so, for they all have one serious drawback—the uncertainty of their action.

A method of using quinin locally in typical cases of hay fever has proved remarkably successful in my hands. The treatment consists of the employment of a saturated solution of the quinin sulphate, in sterilized water, as a nasal spray, and the application to the mucous membrane of the nares of an ointment consisting of quinin and vaselin in the proportion of 30 grains to the ounce, the applications being made every four or six hours. After trying various unguents and combinations, simple vaselin has been found to be the best base. The white vaselin is not suitable, nor is the liquid albolene. Lanolin is an ideal base, but is too offensive to the sense of smell.

The use of the spray alone will not suffice, but should be used as an adjunct to the ointment. Spraying the nares will at once stop all symptoms of coryza, but the effect will soon disappear unless followed by the thorough application of the ointment. This may account for the failure of this treatment as first suggested by Helmholtz, who employed only the spray. The application of the ointment should be made at least every six hours, and it may be necessary to repeat it every four hours. An application at bedtime, and at 2 or 3 o'clock in the morning, will prevent all symptoms through the night. Two or three applications of the spray should be made in the twenty-four hours, at the times when the patient has found the irritation to be at the maximum degree of intensity. In respect to the mode of using the ointment, the little finger is the most convenient applicator. In most persons the slightly bitter taste in the throat from the quinin is not objectionable, but where this proves to be a drawback to its use, euquinin, a synthetical product which is wholly devoid of any unpleasant taste, can be substituted, and will be found equally efficacious.

So far as the effects of this simple remedy have been observed, the results are as follows: used according to the foregoing suggestions, the symptoms of coryza are immediately removed, nor will they return so long as the treatment is continued. The usual accompanying irritation of the conjunctivæ of the eustachian tubes and palate quickly subsides. I have had no opportunities as yet to test this treatment in irregular types of the disease, or to estimate how far these results may be modified by individual peculiarities, but, so far as its effects have been noted, it seems fair to conclude that this will be found a remedy of actual value in the treatment of hay fever, and that it will promptly and completely relieve a large proportion of these cases.

Special Articles.

THE UNITED STATES PUBLIC HEALTH AND MARINE-HOSPITAL SERVICE.

PART I.—A HISTORICAL SKETCH.

(A) FROM ESTABLISHMENT IN 1706 TO REORGANIZATION IN 1871.

The Marine-Hospital Service was established by law in 1798. The necessity for its establishment was mainly economic, though other contributary causes existed.

The proper care of the merchant sailor, when sick or disabled, is essential to the maintenance of an efficient merchant marine, and the economic value of an efficient merchant marine can scarcely be overestimated.

Marine hospitals had existed prior to the act of 1798, establishing the Marine-Hospital Service. In colonial times marine hospitals were maintained at a few places under charter from King George, and several institutions of this character were operated after the Revolution by states or municipalities. The prosperity of the young republic depended in a great measure on men who "went down to the sea in ships," just as in later years the whole internal commerce of the great middle west depended on the boatmen and sailors of the Mississippi, the Ohio and the Great Lakes. The merchant marine is the nursery for naval seamen and the natural recruiting field for the Navy in time of war, and the military value of the capable merchant sailor is scarcely less than his economic value.

EDITOR'S NOTE: This is the first article in a series. A similar treatise on the Army Medical Department appeared May 7, 14, 21, 28 and June 4.

After the independence of the United States was achieved a grateful people felt that they owed much to the merchant sailors who without hesitancy gave up the peaceful schooner for the man-of-war and fought in their country's defense with Paul Jones, Lawrence and Barry. While able to work, these merchant sailors were never dependent on any one, but owing to improvident habits they were prone, when sick or disabled, to become a charge on municipalities or individuals.

A strong sentiment developed favoring some provision by which the Federal Government should care for sick or disabled seamen. This sentiment, which ultimately resulted in the Act of July 16, 1798, establishing the Marine-Hospital Service, was forcibly expressed by the Boston Marine Society as early as 1791, and in the House of Representatives, Nov. 19, 1792, in his speech on the improvement of commerce, the Hon. Mr. Williamson said:

> Wherever it is probable that sailors may be sick, there I would make provision for their support and comfort. Hospitals should be erected, or lodgings hired, as the case may be, at every port of entry in the United States for sick and infirm seamen, where they may be properly attended during their indispositions. The money to be collected at the several ports as hospital money should be expended at such port and no other place, under the care of such person as may be designated for that purpose. Let a small deduction be made from the wages of every seaman, to be paid at the several ports of entry for their use. I have mentioned a deduction from their wages because this mode of raising money would probably be more acceptable, and because it is the most equitable tax that can be levied.

The act establishing the service in 1798 imposed a tax of 20 cents per month on seamen employed on American vessels engaged in the foreign and coasting trades. This tax was to be collected by the several collectors of customs, and was to constitute a fund out of which the President of the United States was authorized to provide for the temporary relief and maintenance of sick and disabled seamen in hospitals, or in such other manner as he should direct. The money collected could only be employed in the district in which it was collected, and if any surplus accrued it was to be used in erecting hospitals.

The President was also authorized to appoint directors of marine hospitals, whose duty should be to provide for the accommodation of sick and disabled seamen and to direct the expenditure of the fund. No provision was made for paying salaries to these directors, and, as might be expected, no appointments were made.

In 1799 the law was extended so as to include as beneficiaries, under the same conditions, officers and seamen of the Navy. The Navy received the benefits of the fund until Feb. 26, 1811, when a separate fund for the care of sick seamen of the Navy was established.

The first marine hospital established under the Act of 1798 was located at Washington Point, Norfolk, Va., and was purchased in the year 1800. According to a report of the Secretary of the Treasury, made to Congress Feb. 16, 1802, marine hospitals had been established and supported solely out of the marine-hospital fund at Norfolk, Boston, Newport and Charleston. While for nearly forty years the entire expense of maintaining the Marine-Hospital Service was borne out of the fund, it was necessary, in order to keep within the limits of the fund, to restrict the classes of cases eligible for treatment, and also to restrict the length of time treatment could be continued. No chronic or incurable cases could be admitted, and no case could be maintained in hospital for a period exceeding four months.

During this period the collectors of customs were continually enjoined by the department to keep the expenditures down to the lowest possible rate, and under this system the compensation of contract hospitals was so meager that only the poorest fare and accommodations could be furnished. In places where there were no local or public hospitals, and where more advantageous terms could not be made, medical charges were restricted to 20 cents per diem, with $2.50 per week for boarding, lodging, nursing and washing. In places south of the Potomac an addition of 20 per cent. to these amounts was permitted.

The inadequacy of the fund had other consequences. It became necessary to consider the fund as an auxiliary to municipal charity, rather than a complete provision for the care of sick seamen. This principle was bad enough in the largest seaports of the east, where local hospitals existed, but infinitely worse in the new towns and cities springing up on the banks of western lakes and rivers, where charitable institutions or provision for the care of sick strangers were infrequent or entirely absent.

The long voyages from the upper waters of the Mississipi and its tributaries to their market at New Orleans entailed great hardship should the boatmen become sick during the trip. Supervising Surgeon Woodworth, in his first annual report (1872), says:

> Nothing was more common than for two out of the five hands who generally managed these boats to die; and it sometimes happened that the whole crew perished from disease, and the boat with its cargo was left deserted.

Continuing, Dr. Woodworth says:

> The cholera epidemic of 1832 and 1834 added greatly to the catalogue of ills. Moved by a feeling of common humanity for the large class of our young men who had surrendered the endearments of a life spent at home, and united their fortunes with strangers by embarking in the more daring, precarious and toilsome interests of commerce—a pursuit, more than most others, beset with temptations to risk of health and life, to recklessness of character and insensibility to future wants—sensible also of the suffering attendant on such an improvident life, whole communities, both on the seaboard and in the interior districts, petitioned Congress for additional appropriations and the enactment of laws providing increased facilities for the relief of this unfortunate class. From one port it was reported that no better place could be offered sick seamen than the warehouses and deserted tenements along the wharf; from another, that they had to be sent to the City Almshouse, which was also connected with a penitentiary for common vagrants and petty convicts; and from another the sad story was told that seamen, sick with various diseases—cholera, smallpox, etc.—were often forced promiscuously into the same chamber, where the dying and the dead were alike neglected.

In response to these petitions, Congress (Act of March 3, 1837) appropriated $75,000 for the erection of a marine hospital at New Orleans and for the purchase of a suitable site for such hospital. The President was also authorized to select and cause to be purchased, for the benefit and use of sick seamen, boatmen, and all other navigators on western rivers and lakes, suitable sites for marine hospitals, provided that the number thereof shall not exceed, for the Mississippi River, three; for the Ohio River, three, and for Lake Erie, one. By this same act the collection of hospital tax was suspended for one year, and, instead of said tax, the sum of $150,000 was appropriated. A board of Army officers was appointed to select the sites. This board, consisting of Surgeon B. F. Harvey and Assistant Surgeons H. L. Heiskell and J. M. Cuyler, selected sites ranging in extent from eight to eighteen acres, at Natchez, Miss.; Napoleon, Ark.; St. Louis, Mo.; Paducah and Louisville, Ky.; Wheeling, Va., and Cleveland, Ohio. Marine hospitals were subsequently built (1845-1851) at all the ports named except Wheeling. Pittsburg claimed, and finally obtained, a hospital at that port instead of Wheeling.

The marine hospital at Detroit, Mich., was authorized by Act of Congress, Aug. 4, 1854. The same act made appropriation for the construction of marine hospitals at Burlington, Iowa; Pensacola, Fla., and for the second hospital at New Orleans.

The Marine-Hospital Service on the Pacific coast was first established at San Francisco in 1851 (the contract system), and a United States marine hospital was in operation at that port in 1854, but was injured by an earthquake in 1868, when the contract system was resumed and continued until the completion of the present hospital.

Beside the places already named, marine hospitals were located, before the reorganization of the service in 1871, at Mobile, Ala.; Charleston, S. C.; Portland, Me.; Ocracoke, N. C.; Evansville, Ind.; Vicksburg, Miss.; St. Marks, Fla.; Burlington, Vt.; Wilmington, N. C.; Galena, Ill., and Port Angeles, Wash.

Most of these buildings were large, substantial structures, erected at great expense, and some of them were sold afterward at a great reduction, especially those built at places where they were not needed at all, as, for example, at Paducah, Ky.; Burlington, Iowa; Galena, Ill., and Burlington, Vt. During the War of the Rebellion many of the marine hospitals, north and south, were used as military hospitals, and the hospitals at Norfolk and Boston were in similar use during the War of 1812.

The necessity of a supervising medical officer, who would not be subject to local influence or prejudices, and who would have control of the entire service, finally became apparent to everyone. In justice to the medical officers of this early period, it must be said that their duties were exclusively professional, and that their authority did not extend beyond the care of the sick. They were not responsible for the care or preservation of the hospital buildings or for the proper disbursement of the fund. The collectors of customs in their respective districts were supposed to supervise the expenditure of the fund and to act as custodian of buildings and property.

By the appointment of a supervising officer versed in sanitary science and hospital management, it was hoped many of these abuses which had crept in under the old system could be corrected, and the inauguration of the new system proved the wisdom of this view. The reorganization of the service for the last fiscal year before (1871) and the first fiscal year after (1872) shows a difference in favor of the last-named year of $56,819.31, or a diminished expenditure of 12⅝ per cent. This reduction of expenses after reorganization was effected notwithstanding the fact that the facilities for affording relief were increased, relief having been furnished in 72 customs districts in 1871 and 81 customs districts in 1872.

The reduction was due to more systematic business methods and the establishment of a system of outdoor relief for patients not ill enough to require hospital treatment. Subsistence supplies and medicines were from this time purchased only after obtaining bids, and the commission of 1 per cent. allowed to collectors of customs since 1798 was abolished.

The Act of Congress approved June 29, 1870, in pursuance of which the service was reorganized the follow-

ing year, enacted that the tax on seamen should be increased from 20 to 40 cents per month. It also required that "all moneys received or collected by virtue of this act shall be paid into the Treasury like other public moneys, without abatement or reduction," and appropriated all money so received for the expenses of the Marine-Hospital Service and to the credit of the Marine-Hospital Fund. It enacted, futher, "that the Secretary of the Treasury is hereby authorized to appoint a surgeon to act as supervising surgeon of Marine-Hospital Service, whose duty it shall be, under the direction of the Secretary, to supervise all matters connected with the Marine-Hospital Service, and with the disbursement of the fund provided by the act."

Dr. John M. Woodworth of Illinois was appointed in April, 1871, as the first supervising surgeon, and under his vigorous administration the work of reorganization was pushed rapidly. The Service became self-sustaining, and, except for new hospital buildings, no appropriations were necessary for maintenance of the marine hospitals after 1873, whereas prior to that year annual appropriations varying from $1,000 to $275,000, and aggregating $4,830,994.34, had been made by Congress.

(To be continued.)

TRAVEL NOTES.

II.*

IS A TRIP TO EUROPE WORTH ITS COST TO THE MEDICAL MAN?

LEWELLYS F. BARKER, M.D.
CHICAGO.

BERLIN, June 25, 1904.

On beginning a medical letter the mind is beset with all sorts of doubts. Impressions in anticipation easily fill entertaining and instructive volumes; impressions in retrospect are prone to dwindle especially when they are submitted to that conscientious winnowing which the busy readers of a modern periodical have a right to demand of the writer who ventures to address them.

In the first place, are there not many who consider a medical trip abroad no longer justifiable, since medicine has reached so high a development at home? In the second place, in view of the electric promptness with which events medical in the old world are chronicled in the new, can an ordinary medical traveler without especial literary training hope nowadays to write anything to his colleagues at home which can either interest by its novelty or please by its form?

No matter how great the development of practical and scientific medicine in America has become and may become, notwithstanding the fact that America has produced the most skillful surgeons the world has yet seen, and in spite of the truth that many of the American scientific laboratories and their leaders are now comparable with the best in the old country, there is and must always be some advantage to be derived from medical travel. This advantage varies much with varying conditions it is true. The harvest to be gleaned by the American physician in Europe at the beginning of the twentieth century is a very different one from that reaped by the pioneers of our profession who went to Louis in Paris early in the last century, or those who went later to Virchow and to von Recklinghausen in Germany, or even later still to Pasteur and to Koch. There are now great clinics and celebrated clinicians in America; autopsies are as well performed—often better—in the large cities of the western continent than they are in the European pathologic laboratories; bacteriology numbers among its American representatives men whose researches have given them a fame which will endure; and physiology, anatomy, physiologic chemistry and pharmacology in the United States and Canada are rapidly entering a veritable "blooming-period." Formerly the young medical man who wished to develop himself medically beyond the point to which the undergraduate training brought him was almost forced to seek a foreign laboratory, a foreign clinic, a foreign master. To-day in our great universities and in some of our post-graduate schools the young graduate can find not only adequate, but almost luxurious laboratory facilities; in almost any branch a master is at his disposal able and willing to lead him into the higher regions of the subject he represents, ready to make the journey with him to the outermost limits of our present knowledge in a given field, and even to thrust him out into unknown territory where, if he have enthusiasm, talent and industry, and especially that much rarer gift, originality, he may by himself make new observations, construct heuristic hypotheses and perform fruitful experiments leading to the advancement of our science.

Why then, with all these advantages at home, should the American physician think of going abroad? Certainly not to obtain a medical degree through the ordinary undergraduate training. In Canada, still, among the more conservative descendants of Scotch and English settlers, it may be of advantage in practice to have the letters M.R.C.S. and L.R.C.P.—formerly so full of magic—appended to one's name and to have the comment current that Dr. So and So has "walked the London hospitals"; in some intensely German-American settlements in the United States the possession of a German doctorate is said even yet to hasten the progress of the aspirant to family practice toward the goal he seeks, but among the great mass of American and Canadian people, it is safe to say that a degree from the better home schools is valued fully as highly, if it be not preferred to one made in Germany, in Great Britain or in France.

The general advantages of foreign travel—the widening of one's experience, the increase in knowledge of the world, of men and of manners, the visiting of great collections of the best products in art, science and letters, the contact with older civilizations, the illumination of history and geography, the acquisition of modern languages in the countries in which they are actually used, to mention only some of them—are these enough, in themselves, to make a European trip desirable for an American physician? Were they the only advantages to be gained, would they compensate for the time and expense involved? I think it is a question for each individual to decide for himself. Where taste inclines and personal and financial relations permit, I imagine that, even in the absence of distinctly medical profit, such a trip would be worth while. It is unfortunate that, too often, where the desire is greatest and the capacity for enjoyment and profit of the highest, there are insuperable hindrances in the way. It would seem a pity, on the other hand, that, sometimes, men, little fitted by nature or education to share the good or enjoy the beautiful, have the opportunity to go to Europe, where, swaggering through, they leave behind them an impression by no means favorable to the country of their origin (or adoption) or to the profession which they fail to honor; happily these are rare and are growing ever less in evidence.

But aside from the general cultural effects of intelligent travel, there are certain specifically medical advantages that every physician may derive from a well ordered journey in Europe. Above all else, perhaps, may be counted the widening of his horizon and the development of his critical powers, regarding matters medical, through comparison. This comes from travel proper, through several medical centers, and the observation of many workers in the branch in which the traveler is interested, rather than through a prolonged residence in one place, though the latter yields benefits which the former can not give. The sharpening of the critical faculty by comparison is all the more desirable for the American physician in that in his undergraduate days he rarely has the opportunity, as the German student does, of wandering from university to university, from one laboratory or clinic to another. The wandering physician has, however, this advantage over the wandering student, that it is only after graduation that one really has a foundation broad enough to become intelligently critical. To watch the routine of a number of equally famed professors of

* The first article in this series was by Dr. Nicholas Senn, in THE JOURNAL, July 23, 1904, p. 261.

internal medicine, for example, has a most broadening tendency on the developing internist; while one man's interest and emphasis lie in a certain direction, another may overlook the importance of this and exert his energies toward an entirely different quarter; the traveling physician, staying long enough in each place to become acquainted with the methods and ideals of each worker, may appropriate to his use the excellences, and will have impressed on him the deficiencies, of the various men whom he meets.

Nothing contributes more to liberal-mindedness, to broad medical cosmopolitanism, to the dissipation of a narrow Chauvinism than a first-hand acquaintance with the methods and results of medical workers in different lands and in different places in the same land. I am reminded of the assertion of Peer Gynt, that, though born in Norway he had become a citizen of the world, getting his luik from America, his well-filled bookshelves from Germany, his clothing, wit, esprit and cynicism from France, his powers of work and thought and some egotism from England, his patience from the Jews, a little *dolce far niente* from Italy, and his courage from the Swedish steel in his blood. To become a medical *Weltbürger*, one must learn to appreciate the virtues of his fellow-craftsmen of all nations. If a man really becomes, like Ulysses, a part of all that he has met, it surely behooves him to meet with and assimilate as much of what is great in the world as he can.

Again it is a signal advantage to a physician to learn personally to know the men of whose work he has heard and whose writings he has read. The student's whole perspective of the medical world is altered by the extension of personal acquaintance. Past judgments of medical work are modified and future criticism is in large measure controlled through impressions formed in the face-to-face encounter. A paper which might have pleased by its plausibility is sometimes robbed of import by the palpable weakness of a physiognomy. And, though less often, perhaps, we learn to place confidence in the contributions of a man whose countenance and character force conviction where his writings, in themselves, might have left us in doubt.

The period of development in which a medical trip abroad is taken should influence greatly the ordering of the journey. The needs and possibilities of the recent graduate are very different from those of the older practitioner or of the experienced investigator; there are advantages and disadvantages inherent in travel at each stage. Perhaps the majority of men who go abroad do so soon after graduation and after a year or more of experience as hospital interne or as assistant in private practice. And this is the time, I think, when foreign travel does most good. The traveler has all the advantages of youth and unimpaired enthusiasm; he is keen, earnest, impressionable; his ideals are still in a state of flux; his virginity of sense more than compensates for his lack of experience, ignorance of his powers, indecision as to his course, and poverty of purse.

The older and more experienced physician, on the other hand, knows more accurately what he wants and may set about getting it in a direct way; he has found out what he can do and what he can not do; the knowledge of his limitations permits of concentration in his special field and prevents unprofitable excursions outside its boundaries. Moreover, the older medical traveler, while perhaps never profuse of money, is more often in the fortunate position where he is able financially to avail himself of the best opportunities for work, a condition not to be too lightly considered in planning a medical trip in Europe. For while traveling and living in most Europeaan countries is from one-third to one-half cheaper than in America, still if one is to benefit fully by his trip abroad, he should not have to ponder too seriously the expenditure of an extra mark or lire. It has seemed to me sometimes that men have gained less from a whole year of straitened living in Europe than they could have acquired in a few months with the same total money outlay. The possibility of being "penny wise and pound foolish" ought ever to be borne in mind by the economically inclined, and that a large number of American medical men in Europe are, perforce, economically inclined, notwithstanding the prevalent opinion among Europeans to the contrary, one can easily convince himself by living and working among them.

A medical year abroad may often come as a boon to a busy American professor, or an overworked American practitioner. The Sabbatical year, adopted by some of our universities, or an equivalent thereof, is an institution which should be generally encouraged. Even in private practice, the possibilities of the Sabbatical year should not remain unconsidered. Such a year not unfrequently gives a new lease of life to him who is lucky enough to get it. The Israelites murmured at their manna; the sameness of the daily grind too often gradually undermines the nerves. An entire change of work and environment does wonders for a man's physical and mental well-being. If the year be spent in intelligent medical work away from home, away from one's own university, or one's own practice, the sense of leisure felt and the freedom from responsibility gained go far to make the period one of the happiest and most profitable in a life's experience. I assume, of course, that the desire for medical travel and for medical work exist, for in its absence, a year so spent might be a waste of time as well as reach the "tragic bitterness of boredom."

I assume also that the "impediment of tongues" for the prospective traveler is not insuperable; it is essential for a satisfactory trip that one be able to understand the spoken word (not simply the written page) and to speak, himself, passably the language of the country in which he makes his longest stay, and it is desirable to be able at least to smatter the languages of all the countries through which he travels, even if he do not speak them with elegance. The difficulties of smattering a number of foreign languages are frequently overestimated; on the other hand, the difficulties of getting a tolerably firm control of even one modern language other than one's own tongue are usually, I think, underrated. How many an American physician has returned from Germany or France uninterested in the work seen and in the men met, severely critical of everything German and French chiefly because of the barrier of speech! Not everything German is worthy of imitation; there are hosts of things medical and surgical in which Germany would do well to imitate America, but it is really only fair to make sure that one understands before he wholesalely condemns. The French physicians have their own peculiar skill and acumen, their own clear methods of presentation, their own ingenuity of experiment. It is a pity that these uniquely French characteristics should be missed simply on account of difficulties with the language.

(To be continued.)

Effects of Lightning.—The *St. Petersburger med. Wochft.* of Jan. 23, 1904, contains a report by E. Rippe of a catastrophe in which 22 members of a troop were more or less injured by lightning which struck the stable in which they were engaged. All were rendered unconscious but most of them recovered consciousness in fifteen minutes. None of them saw the lightning nor heard the thunder. Fifteen were able to resume work after a few minutes, but 7 were seriously injured. One man exhibited convulsions and another delirium persisting for two days. Nearly all complained of dull headache and sound in the ears—all evidently symptoms of a concussion and hyperemia of the brain. The spinal cord was likewise affected in one case, as disturbances in urination were observed. The effect of the lightning on the peripheral nervous system was manifested in a paretic condition of one or more limbs, usually the legs. In some cases there was cutaneous anesthesia or hyperesthesia. The peripheral symptoms had all subsided by the end of a few days. One of the men presented transient symptoms in the lungs indicating hyperemia with hemorrhages, but these symptoms soon disappeared. He gives illustrations of some of the ramifying burns on the skin—the "lightning pictures," and remarks that the anatomic findings in the men and horses killed were strikingly similar, testifying to hyperemia and hemorrhage in the brain substance and also in lungs, liver and kidney. The right heart was empty and the spleen did not seem to be affected.

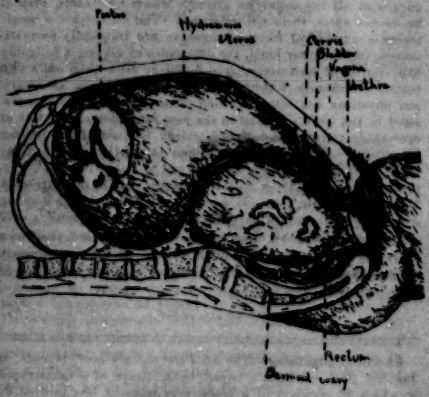
Clinical Report

A CASE OF PREGNANCY, HYDRAMNIOS AND LARGE OVARIAN DERMOID.

F. F. LAWRENCE, M.D., D.Sc., LL.D.
Surgeon to Lawrence Hospital, and Clinical Lecturer on Abdominal Surgery and Diseases of Women, Starling Medical College.
COLUMBUS, OHIO.

The occurrence of pregnancy complicated by an ovarian tumor while not unique is not of very frequent occurrence. A pregnancy with hydramnios is probably of slightly greater frequency but a pregnancy with hydramnios and a large dermoid cyst of the ovary developing downward so as to completely fill the true pelvis and lift the pregnant uterus entirely above the pelvic brim is, so far as I have been able to learn, unique. In all the literature at my disposal I can find no such case recorded.

History.—The patient, M. S., was seen with Drs. Ranchous and Fitch early in December, 1903. She was small, anemic, highly nervous, and her abdomen was enlarged to the size of pregnancy near term. She had not menstruated since July, 1903. Menstruated normally in June and just a "slight show" the first week in July. She had suffered little pain, but lately had had severe pressure symptoms, irregular pulse, dyspnea and great general depression.



Examination.—The abdomen was symmetrically enlarged, with distinct fluctuation and a dull percussion note.

The vagina was almost completely blocked by an irregularly hard and cystic tumor which occupied entire pelvis. Cervix carried up entirely above symphysis and pointing toward vagina. Body of uterus could not be made out, but where it should have been was a fluctuating cystic mass which extended in front of the pelvic tumor and up to the diaphragm. Cervix felt like an early pregnancy, but as body of uterus could not be made out and as breast symptoms were negative, the diagnosis was not clear. No fetal heart sounds and no placental bruit. The diagnosis between uterine pregnancy with hydramnios and a dermoid in the pelvis, and an old extrauterine pregnancy and a cyst of the ovary, could not be made.

A few days later she was admitted to the Lawrence Hospital and Dr. D. N. Kinsman saw her in consultation. He recognized the dermoid tumor and expressed doubt as to a pregnancy. At this time the pressure was so marked that a very slight movement, such as changing position in bed, would cause pulse to become very rapid, 130 to 140; when quiet it was 96.

Operation.—December 18. Abdominal walls thin and anemic; on opening peritoneum a tumor with very thin walls showing no muscular fibers, presented. This proved to be the hydramniotic pregnant uterus, with the fetus at upper part. As I could not get behind the uterus to bring up the pelvic tumor which could be plainly felt through broad ligament, I drew off over a half gallon of clear straw-colored fluid with a Tait's blunt trocher, and then delivered the uterus outside the wound. Not until this procedure had been completed could we determine that it was the uterus.

I could not even then bring up the pelvic tumor until I clamped and cut off the right broad ligament. The dermoid was then delivered and a rope clamp thrown around the entire pedicle to include the broad ligaments and the cervix. The operation was completed by a supra-vaginal hysterectomy and removal of the ovarian dermoid. Stump covered over and dropped as in an ordinary hysterectomy.

An uninterrupted recovery followed. The drawing shows the relation of uterus and dermoid. The pregnancy was approximately five and a half months.

A CASE TO THE DISCREDIT OF ETHER.

EVAN O'NEIL KANE, M.D.
KANE, PA.

B. J., age 18, slender and delicate; kidneys, heart and lungs apparently sound. A month previously two trifling operations were performed under cocain anesthesia for removal of hypertrophies of the turbinated bones. For the present operation, tonsillectomy, ether was used. The patient showed neither nervousness nor anxiety and appeared to take the anesthetic nicely, falling into a quiet sleep. Anesthesia had proceeded for about five minutes when the respirations apparently ceased and cyanosis rapidly supervened. The mouth was opened and the tongue drawn forward; but this made no difference, the difficulty appearing to be due to paralysis of respiration; pulse could still be felt at the wrist. Inversion, artificial respiration, oxygen and other ordinary methods of restoration were resorted to without avail, the cyanosis deepening rapidly. Forcible dilatation of the anal sphincter was then resorted to and whether on this account or not a feeble attempt at respiration followed, after which, by the aid of artificial respiration, etc., complete restoration was gradually effected and the operation was thereafter performed without anesthesia.

In this case the patient, though delicate, appeared entirely sound. The accident occurred before anesthesia was complete; there was no stage of excitement, no spasm nor other disturbance; the patient merely stopped breathing, as in an ugly case of chloroform narcosis, except that the heart's action was not primarily affected. Squibbs' ether was employed through an Ellis inhaler.

This is another example, teaching that patients are never safe during anesthesia, even by the safest anesthetic.

New Instrument.

A NEW TREATMENT CASE AND STERILIZER.

MARK D. STEVENSON, M.D.
Oculist to the City Hospital.
AKRON, OHIO.

I have devised a case which will particularly appeal to the eye, ear, nose and throat specialist.

The following claims are made for it:

First:—When closed it is small and looks well, much like any physician's case.

Second—There is no waste space in it, even the lid being utilized.

Third—As originally designed and as illustrated below, its contents are as follows: 4 glass stoppered half-ounce tincture bottles, 7 glass stoppered half-ounce salt mouth bottles, 4 screw cap quarter-ounce ointment jars, 5 dropping bottles of half-ounce capacity, with bulbs of cellulose, a material that is not affected by medicaments, and therefore to be preferred to the old soft rubber which must frequently be renewed; 4 drop-

ping vials, each of 2 drams capacity, for the storing of small quantities of medicine, also provided with cubicum bottles. The compartments for these bottles and jars are all of the same dimensions, allowing an assortment to suit individual requirements. The ear, nose and throat man would prefer chiefly salt mouth bottles, the oculist a larger number of dropping bottles, and the one who practices in all four departments would prefer a number of each.

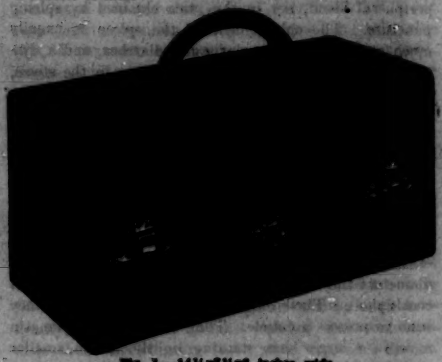


Fig. 1.—14¼x7½x6 inches wide.

Fourth—There is plenty of room in the front part of the tray to carry ointment tubes and any long instruments without taking them apart, e. g., ophthalmoscope and probes, applicators, etc.

Fifth—A large cotton holder in lid in which a whole of any of the smaller packages of cotton may be readily placed.

Sixth—A compartment in lid 2¼x2⅝x7½ inches to hold prescription blanks, bandages, small tongue towels, etc. The

Fig. 2.

inside of the lid of this compartment is provided with loops in which ordinary instruments may be carried, e. g., foreign body spud, scissors, fixation forceps, scalpel, etc.

Seventh—A lower drawer 8¼x12x2 inches, in which instruments may also be placed without being taken apart. My portable sterilizer is large enough to hold and carry the usual eye, ear, nose and throat instruments. Thus one can carry everything that is necessary for treatment or operation in this case.

Eighth—The lid is supported by the handle when turned back, so that no strain comes on the hook of the box. When the lid is open the case is useful as an office treatment case, with cotton holder, etc. To make it portable the lid is closed and clamped.

The following claims are made for the sterilizer: First—It is large enough to hold not only eye, but also ear, nose and throat instrument—tonsilotome, adenoid forceps, etc.

Second—It is small, light and durable, without anything to get out of order.

Third—The two alcohol lamps are attached to the body of the instrument, serving as a support while in use, and when not, being carefully folded into small space at its ends. The supply of alcohol in larger in two lamps than in one, and these lamps can not be forgotten, as will sometimes happen to those unattached.

Fourth—It is almost inable and does not corrode and injure instruments so quickly as will a tinn or nickel-plated sterilizer, owing to the fact that no exhibition takes place.

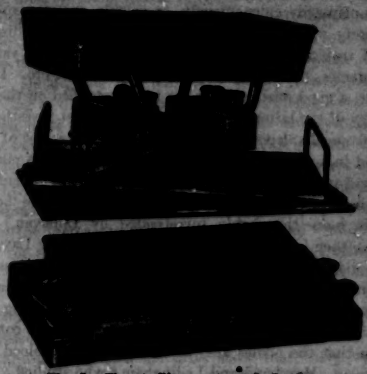


Fig. 3.—The sterilizer, open and closed.

Fifth—It is of such size that it can be carried in the lower drawer of the treatment case.

The Blood Pressure in Balneological Practice.—Stillmark of Perasu, Russia, reviews the history of blood pressure measurements and their application in hydrotherapy. In his article in the *St. Petersburger med. Wochft.* of Sept. 26, 1903, he discusses the effect of carbonated baths in particular, and warns that when the normal increase in blood pressure is not observed in a carbonated bath, there is something wrong with the circulation and this kind of bath is distinctly contraindicated. In order to detect these subjects in time he has devised an apparatus for graduated, very light muscular exertion as a standard for comparison. The patient is seated and with his right hand lifts and lowers an iron rod which hangs suspended from a point at about one-fourth from one end. This end carries a weight, and a sliding weight is also carried on the longer end, which can be adjusted to render the muscular exertion greater or less. The subject's left arm, to which the Riva-Rocci blood measuring apparatus is attached, rests quietly on a table. The effect of the muscular exertion on the blood pressure can thus be read from the resting arm. Under normal conditions the pressure rises during this light exercise, and when it does not rise or drops instead, carbonated baths will surely prove injurious.

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THE ETIOLOGY OF TROPICAL SPLENOMEGALY.

The etiology of a group of diseases in which considerable enlargement of the spleen—splenomegaly—is the most noticeable anatomical feature has baffled many attempts at solution. Belonging to this class of diseases are primarily splenomegaly, or splenic anemia; splenomegaly with cirrhosis of the liver, or Banti's disease, and tropical splenomegaly, known also under a variety of names, such as kala-azer, dum-dum fever, etc. However, a good deal of light has now been shed on the etiology of the latter. Leishman[1] was the first investigator of tropical splenomegaly, who, in 1903, in a case of this kind in a spleen weighing two pounds and seven ounces, found innumerable parasitic bodies which he considered to be a peculiar form of trypanosoma. These bodies were more thoroughly investigated by Donovan,[2] and since then by several other observers, including Laveran, the discoverer of the hemamoeba malariæ, who classified them as a species of piroplasma. To this classification Patrick Manson and Low strongly object, claiming that their observations completely disprove Laveran's contention that the bodies are parasites of the red blood corpuscles. Marchand and Ledingham,[3] who studied a case of this kind in Germany in the person of a soldier returned from China, incline more toward Leishman's original view of the trypanosoma nature of these bodies.

The morbid condition in which the Leishman-Donovan bodies are found is by no means a rare disease, but, on the contrary, one of extensive prevalence in some parts of the tropics, particularly in India. In the latter country it is of such economic importance that it has several times been the object of official investigation by medical government commissions.

The most complete report on the newly-discovered parasite has now been furnished by Christophers,[4] who had been detailed by the Indian government to study cases of tropical splenomegaly in Madras. Christophers gives the credit of first having seen the parasitic bodies in tropical splenomegaly to Cunningham, whose observations, reported in 1885, had, however, not attracted general attention, and had, in fact, been entirely forgotten. Christophers, in order not to increase the confusion, accepts for the time being for the parasite the name proposed by Laveran, *Piroplasma donovani*. The disease in which it is found, no matter what its early manifestations are, always presents the final picture of great enlargement of the spleen, anemia, emaciation, irregular pyrexia, abdominal symptoms. Quinin has no influence over the disease; malarial parasites are not found in the peripheral blood, nor in the juice obtained by splenic puncture. The enlargement of the spleen is usually much greater than in malaria and diarrhea, and a dysenteric condition, with blood and mucus in the stools, are constant factors in advanced cases. The parasites when present are never found in the peripheral blood, but in the spleen, the liver, the bone marrow and in granulating dysenteric ulcers of the intestines. During life they can be best demonstrated by splenic puncture. They can be seen unstained, but they are much better demonstrated in cover glass preparations stained by Romanowsky's method. In specimens so treated they exhibit a remarkable uniformity in size, about 2.5 μ in diameter; they are either round or have the shape of a cockle-shell. Their outlines are very sharp, and they seem to possess a cuticle. They include two chromatin masses—a larger one, staining lightly, and a smaller one, staining intensely. The two chromatin masses are usually situated opposite to each other in the shorter axis of the parasite. The small chromatin mass is usually rod-shaped, but may appear as a dot only. The bodies are seen free, included in polynuclear leucocytes, and particularly in macrophages. They can be easily demonstrated in sections of the spleen, the liver, the bone marrow and in the intestinal dysenteric ulcerations, in which the ameba coli is not found. These intestinal ulcerations appear to be closely analogous in their histology and parasitology with what has recently been found by Wright[5] in a case of tropical ulcer of the skin.

Christophers does not think that the parasites found in tropical splenomegaly belong to the genus piroplasma, but he inclines to the view that they are to be classed among the microsporidia.

IMMUNIZATION AGAINST SURGICAL INFECTION.

Despite the most rigorous precautions and the utmost refinement in technic, infection of surgical wounds can not always be prevented. Thus, in operations on the stomach and intestines, it is often impossible to avoid the development of peritonitis as a result of the escape of the contents of these viscera. Attempts have been made to increase the resistance of the peritoneum by the induction of artificial hyperleucocytosis. For this purpose subcutaneous or intravenous injections of albumoses and intraperitoneal injections of normal saline solution, bouillon, nucleic acid and tuberculin have been employed experimentally, and in some instances normal saline solution has been injected into the human peritoneum in advance of abdominal operations as a prophylactic measure. In pursuance of this line of investiga-

1. British Med. Jour., May 30, 1903, p. 1252.
2. Ibid., Nov. 28, 1903, p. 1401.
3. Centralblatt f. Bakteriologie, vol. xxxv, p. 804.
4. "A preliminary report on a parasite found in persons suffering from enlargement of the spleen in India. Calcutta Government Printing, 1904.
5. Journal of Med. Research, vol. x, 1903, p. 472.

tion, Professor Mikulicz-Radecki[1] undertook the immunization of guinea-pigs to *Bacillus coli* by intraperitoneal injections of virulent cultures of that organism, but deeming this method inapplicable to man, he proceeded to increase the general resistance to infection by the development of hyperleucocytosis. To this end injections of 0.85 per cent. sodium chlorid solution, 2 per cent. neutral bouillon, starch in physiologic salt solution, 2 per cent. aleuronat-mucilage, and 2 per cent. nucleic acid were made into the peritoneum and of 5 per cent. nucleic acid beneath the skin.

The most pronounced results were obtained with nucleic acid, the increase in the number of leucocytes being preceded by a diminution, while the temperature rose above normal, and the resistance of the peritoneum was increased from sixteen- to twentyfold. The effects were heightened by repeated injection, either into the peritoneum or beneath the skin. Further, recovery occurred in animals protected by preparatory treatment, when the contents of the stomach or the intestines were forced into the abdomen through an opening made artificially, while control animals perished, and some animals thus infected were saved when treated within a short time subsequently. The phagocytic activity of the elements of the peritoneal exudate was early quite marked under these circumstances. The injections were found to be entirely innocuous. Observations were now made on human beings, 50 c.cm. of a 2 per cent. solution of nucleic acid being introduced beneath the skin. Fifty-eight cases were thus treated, operations on stomach, intestines or other abdominal viscera being performed in fifty-five at varying intervals after the injection. It was observed under these conditions that, as in animals, hyperleucocytosis followed, though almost always preceded for an hour or so by hypoleucocytosis. Twelve hours was thought to be the interval between injection and operation yielding the best results. The injection was attended with local redness and tenderness and slight swelling for a day, and with moderate rise in temperature. At times there was a slight rigor and also vertigo.

While it is difficult to gauge the effects of the preparatory treatment, particularly in view of the comparatively small number of cases and of the observance of the usual aseptic and antiseptic precautions, the impression was gained that the results were better with respect both to the number of recoveries and to the progress of the individual cases than under ordinary circumstances. Thus of forty-five cases in which the abdominal cavity was opened and was exposed to infection by the contents of the stomach or intestine or other infectious material, recovery ensued in thirty-eight, while in none of the remaining seven was death due to peritonitis. The object of the injections is to induce hyperleucocytosis, and this end can be readily attained by intraperitoneal infusion of normal saline solution, and Mikulicz relates that he has for two years practiced free irrigation of the peritoneal cavity with warm normal saline solution in all cases of abdominal operation in which the peritoneum is exposed to the risk of infection. The procedure is so simple and so entirely free from danger and the results to be anticipated are so promising that it would seem a mistake not to adopt the measure whenever it appears to be indicated. The application of the same principle to cases in which perforation or rupture of abdominal viscera is threatened or has recently taken place also suggests itself in this connection.

1. Lancet, July 2, 1904, p. 1.

THE INCREASE OF SUICIDE.

The increase of suicide has come to be such a marked feature of social statistics in this country that physicians must be made to realise the possibilities there may be of bringing about a decrease in this unfortunate matter by more care and prevision. Suicides are somewhat more than twice as frequent now as they were ten years ago. During the last ten years poison has replaced shooting as the most frequent method of taking life. The poison most frequently used is carbolic acid, which almost anyone under any circumstances can procure without let or hindrance. About five out of every six cases of suicide by poison are accomplished by carbolic acid. It seems very probable that if physicians would bear in mind the increasing tendency to suicide and would suggest the taking of precautions against it more frequently by attendants and friends, and would lend their influence to have legislatures prevent the free retailing of carbolic acid as at the present time, there would be a decrease in the mortality from suicide.

Carefully collected statistics show that there was a constant increase from 3,531 suicides in 1891 to 6,600 in 1897, then a drop in 1898 to 5,920, and in 1899 to 5,340. In 1900 there were 6,755 suicides, an increase of over 150 above the figures for 1897, the highest previous number, and there has been a constant increase since, in 1903 the number of suicides being very close to 8,600. During the last thirteen years—that is, since 1891, there have been altogether 77,617 cases of suicide reported in the newspapers of this country.

The decrease in the number of suicides during 1898 and 1899 is not surprising, if we remember the conditions that prevailed in the commercial world at that time. After a period of hard times there was the wave of prosperity and a decided reaction in men's feelings that made the future look bright enough for everyone. Curiously enough, the statistics, however, do not show that city life is so much harder on the people than country life. During the last ten years the suicide rate in fifty cities of this country has about doubled. This is, however, only in proportion to the suicide rate throughout all the rest of the country and does not especially condemn the high pressure of large city life as a disturbing factor of mentality. The most serious thing about the statistics is the fact that, though suicides are more common among men than women in all countries,

the difference is gradually growing less, and in recent years this has been quite marked. At the present time, between the ages of 10 and 25, suicides of women are more numerous than those of men between the same ages. Half a century ago five times as many men committed suicide as women. A quarter of a century ago the proportion was three men to one woman. As the occupation of women in wage earning has become more widespread, the opportunities for the intense discouragement which precedes attempts at suicide have increased. During the last three years the ratio of suicides among men to those among women has been only two and one-half to one.

An interesting feature of the suicide statistics for physicians is the very large number of the medical profession who kill themselves each year as compared with the members of other professions who find life unbearable. In the last thirteen years 535 physicians in the United States have committed suicide, while only 98 clergymen and 61 lawyers have done away with themselves. There seems to be no doubt that overcrowding in the profession and the consequent difficulty of achieving anything like success has been the main factor in this. As is pointed out by physicians themselves, however, it seems not improbable that drug addictions of various kinds, to which they are so much more liable than the other professional classes, are responsible for not a little of this disproportionate tendency to suicide. Not infrequently, of course, too, physicians afflicted with ailments which they better than others know to be incurable save themselves long suffering by this means. In most of these cases, however, there is a lack of will power to begin with, for physicians better than others know well how manfully brother physicians bear up under the strain of prolonged illness in many cases and courageously face pain and suffering to their appointed end.

TROPICAL ANEMIA (ANKYLOSTOMIASIS) IN PORTO RICO.

A very creditable and gratifying feature of our recent colonial expansion has been the beneficent work in preventive medicine in Cuba, Porto Rico and the Philippines. As the government of these possessions has been for the most part under the control of the War Department, this work has been naturally done chiefly by medical officers of the Army, and our readers are fairly familiar with the main features of the banishment of yellow fever from Cuba, and with the less brilliant and successful but far more arduous fight which has been waged in the Philippines against plague, cholera and epidemic dysentery.

Sanitary affairs in Porto Rico have excited little interest since the prompt extinction of the smallpox epidemic in the island five years ago by the admirable sanitary campaign of Hoff—the "vaccination of a nation." The work now being done there by Ashford and King under the authority of the governor, to control the ravages of ankylostoma among the rural population is of great interest and importance. On the military occupation of Cuba and Porto Rico the attention of medical officers was at once drawn to the widespread occurrence of the so-called tropical anemia among the native population. This was generally attributed, especially in Cuba, to starvation or to a deficient diet, in which a due proportion of proteids especially was lacking. In 1899, Assistant-Surgeon Bailey K. Ashford, U. S. Army, reported the endemic prevalence of ankylostoma in Porto Rico, this being the first recognition of its occurrence except sporadically in the West Indies. He also recognized and reported its causal relation to the prevalent tropical anemia. Since that time he has treated successfully a large number of cases and has been active in calling the attention of the medical practitioners and the authorities to its ravages.

A few months ago the governor of Porto Rico appointed a commission consisting of Dr. B. K. Ashford of the Army, and Dr. W. W. King of the Public Health and Marine-Hospital Service, for the study and treatment of anemia in Porto Rico. This commission is now traveling about from district to district with a camp hospital for the treatment of the severer cases and an out patient dispensary for those able to walk. The condition which they find is described as follows:

In valley, mountain and coast alike is found a ghastly population dragging out a miserable existence, and with a death rate which has shocked all who have occasion to learn it. The number of children who have lost parents and most of their relatives is very large, and these pick up a living as they can. Men who should be supporting their families are chronic invalids and the families, also infected by the disease, are in a condition of misery beyond description. On the arrival of the hospital camp they come in scores and hundreds, on foot or horseback, or borne along on hammocks. They are cured, taught how to prevent reinfection, and return home well and happy to spread the good news. The visit of the commission to the district of Bayamon resulted in 931 cures and a diminution of the death rate in the district of 20 per cent. In the mountain coffee-growing district of Utuado, where the commission now is, 1,500 cases have been cured in six weeks, and new patients are still pouring in. All of this good work has been done on an appropriation of $5,000, which is not yet exhausted.

Such beneficent work illustrates the highest field of the physician's labor. The investigation of ankylostomiasis has marked an epoch and disclosed a new avenue for the exercise of prophylaxis in medical science.

TRANSACTIONS OF THE SECTIONS.

The bound volumes of section transactions are highly prized by many members of the Association. There may be some who are unfamiliar with these publications, and we call attention (under the head of Association News on page 343 of this issue) to the need of subscribing in advance. The papers and discussions appear

in THE JOURNAL, but the cloth-bound books of the various sections make permanent and individual records that are available for any who wish to possess them.

SNAKE VENOM A PRODUCT OF DIGESTION.

Experiments with the production of poison by vipers have indicated that the secretion of the poison is closely connected with the process of digestion. Dr. G. de Christini[1] states that from his experiments he concludes that the poison glands of the snake take the place of the salivary glands in the higher vertebrates and are designed to free the organism from poison products. Extirpation of the glands caused death, as did also prevention of the excretion of the poison. The poison is secreted under the influence of digestive stimuli and when milk, as an example of easily digested food, was given to snakes the poison became less intense. Dr. de Christini concludes that the secretion of the poison glands has the same function as that of the kidneys, that is, to free the body from the poisonous substances in the blood, from which the venom is formed.

A MORE ACCURATE WAY TO TAKE TEMPERATURE.

The advantages of a means of taking temperature at frequent intervals without disturbing the patient for the purpose are obvious. Mantoux[2] of Paris accomplishes this by having the patient micturate on the upper part of the bulb of a thermometer slanted in such a way in the vessel that the stream of urine flows along and over the bulb. The mercury rises much faster than when the thermometer is placed in the mouth or rectum. This is not a new method, but it has not been considered accurate. Mantoux, however, has made 319 comparative tests of the temperature thus ascertained, and the temperature found in the mouth, axilla or rectum. The difference between the urine temperature and the rectal temperature averaged .02 to .34 of a degree Centigrade, and never amounted to more than half a degree except in one instance. The findings constantly paralleled those of the rectal temperature, except that the maximum in the urine was just a trifle below the rectal temperature. The harmony between them was far more pronounced than between the mouth, axilla and rectum temperature. He thinks this mode of temperature taking will be found especially useful in treatment of tuberculosis on account of its convenience, comparative precision and the absence of emotional fluctuations.

THE TRAVELING ADVERTISING DOCTOR TURNED DOWN.

As a usual thing the traveling quack finds no trouble in securing space in the country newspaper in which to proclaim his marvelous power and success in the curing of every disease. Once in a while, however, he comes against a newspaper whose editor has a few ideas on the propriety of matters and he receives a shock. The Charleston (Ill.) *Daily Courier*, published by C. L. Lee, recently commented on the fact that a man representing himself to be a physician, who wanted to advertise, but whose business was declined, made considerable remark concerning the refusal. A part of the editorial comment was as follows:

> Now we haven't much to say, publicly, about this affair, except to advise all people who need the services of a physician to consult some one of our reputable home doctors. If men like the one in question were all they claimed to be, there would be little need of them running about the country as they do. Again let us advise our readers to consult your home physician; you know him and can depend on him, for he is here to-day, and will be here to-morrow, if you need him; whereas, men such as we have referred to are here to-day and gone to-morrow; they care nothing for you personally, except to get your money.

The grasp of the subject by Mr. Lee evidenced in this pointed comment seems exceedingly satisfactory. This newspaper proprietor has considerable regard for what he puts in his advertising pages. We have not seen his paper, but we certainly wish it success, and hope that he is as well informed and level-headed on other subjects as he appears to be on the subject of the traveling advertising quack versus the responsible home physician.

THE TUBERCULIN TEST.

An early positive diagnosis of tuberculosis is of paramount importance, for well-known reasons, but it is hard to make in many instances. Often the most thorough physical examination will not be sufficient to detect tuberculosis, and in many of the obscure cases, especially of surgical tuberculosis, diagnosis by ordinary means is impossible. Consequently the tuberculin test, when it was announced by Koch in 1890, was heralded by many as one of the great discoveries in medical science. Tinker[1] gives the results obtained from the application of the test in 400 cases at the Johns Hopkins Hospital, where it is used in doubtful or suspected cases of tuberculosis. Used in the small doses needed and under proper conditions, he concludes that the test is not harmful and does not give rise to distressing symptoms. A fact to be kept in mind is that every individual will react with high temperature, often nausea, vomiting, chills, headache, etc., if the dose is large enough. It is usual to begin with from 1 to 3 milligrams of Koch's old tuberculin, and, if no reaction occurs, the dose is increased to a maximum of 9 milligrams. A reaction to 6 milligrams is considered certainly tuberculous; a reaction to 9 milligrams is strongly presumptive, but not positive. However, occasionally a non-tuberculous reacts under these conditions, and sometimes a tuberculous fails to react; but such cases are rare. It may, therefore, be compared to the Widal test in typhoid in not being absolutely reliable, but nevertheless of great value. A proper temperature chart preliminary to the injection is of great importance. The temperature should be taken every two hours for at least eighteen hours. The application of the test in cases where the temperature is not down approximately to normal for about twenty-four hours probably explains its unreliability in some hands. It is best to make the injection deep into some muscle, such as the deltoid, using, of course, antiseptic precautions. Patients with healed lesions even for years react to the test.

1. Annali d'Igiene Sperimentali, Roma, quoted by Public Opinion, 1904.
2. Bulletin de la Société Méd. des Hôpitaux, xxi, No. 24, July 1st, July 14.

1. Johns Hopkins Hospital Reports, 1903.

The location of the lesion probably has no effect on the reaction. The test has been of service at Johns Hopkins Hospital in the diagnosis, especially of tuberculous joint lesions. Tuberculosis of the kidney, when no tubercle bacilli were found in the urine, was diagnosed in several cases by tuberculin and the diagnosis confirmed by subsequent operation. None of nine cases of Hodgkin's disease reacted to the test. On the whole, the analysis of the results obtained seems to be favorable to the test both as regards its harmlessness and its reliability.

THE LAW DEMANDS SINCERITY.

A recent Iowa Circuit Court decision is of interest. The suit was one for infringement of patent, and the parties were the owners of the apparatus known, respectively, as "oxydonor" and "oxygenor," to whose troubles we have before referred. The court stated that these and similar fakes can not have the indorsement of the courts when the pretended inventor can not make or refuses to make an explanation. The court admitted that reputable witnesses testified that when sick they used some of these devices, and that they were restored to health; but the court goes on to say that there is nothing to prove that this sequence of events is in the nature of cause and effect. He remarks: "It would be just as reasonable for an Iowa farmer to say that his barn was not destroyed by the last thunderstorm because there was a lightning rod on Mount Piagah, as for a man to say that his restoration to health was brought about by the use of an oxydonor or an oxygenor. The decision is similar to the hard-fought fig-syrup suit in California. In the latter cause no redress was given to the company which sued another firm for damages because of imitation of label and package, and the ground of the refusal given by the court, our readers will remember, was that since the fig-syrup company was operating a business based on fraud, it could not come into court and claim protection. This is the ruling that was desired and finally secured in the famous Weltmer case in Nevada, Mo., where it was a physical impossibility for the alleged healer to carry out the promises that he made. This principle of law is certainly a just one, and should find application in many other cases.

THE RELATION OF ALCOHOLISM TO THE NATURAL PROCESSES OF RESISTANCE.

With many physicians alcohol has always been a standby in septic conditions. Patients with septicemia are filled with whisky, despite the depressant effects of large doses of alcohol, as if the alcohol were expected either to kill the bacteria in the circulation or at least to neutralise their toxins. Yet there are many facts that do not harmonize with this procedure, and a large number of physicians assume either a sceptical or a strongly antagonistic attitude toward the beneficial results claimed for alcohol in septicemia. No one will question the greater mortality of pneumonia in alcoholics as compared with that in normal individuals, and pus infections usually progress with excessive virulence in patients with delirium tremens; in general, chronic alcoholism seems to lower decidedly resistance to infectious diseases. It is, therefore, quite reasonable to question the idea that acute alcoholic intoxication will protect against these same infections. As far as clinical experience goes, testimony can be readily adduced for both sides. Experimental work with animals has generally indicated that all forms of narcotics make them more easily overcome by bacterial infections. Rubin[1] has just reported an interesting study along these lines, with important clinical bearings. The resistance of rabbits to cultures of pneumococcus and streptococcus was used as an index, and it was found to be decidedly reduced by injections of alcohol, ether, or chloroform. During the course of the infection watch was kept on the leucocytes, and it was generally found that the number was much less in the narcotized rabbits than in the controls, and it was also found that as soon as the leucocytes in the circulation of an infected animal begin to decrease the number of bacteria increases. Occasionally it was found that narcotized rabbits died despite a fair degree of leucocytosis, which suggested that there may also be a reduction of their activity under these conditions. Therefore, the power of the leucocytes to pick up particles of carmine injected into the peritoneal cavity was examined, and it was found that in the narcotized rabbits not nearly as large a proportion of the leucocytes contained carmine granules as was the case in normal rabbits. Alcohol was also found to exert a negative chemotaxis. From these experiments it would seem that it is chiefly through a detrimental influence on the leucocytes that alcohol and similar substances reduce resistance to infection. In order to follow up these results, leucocyte counts were made on sixty of the inmates of an inebriate hospital, and the average number of leucocytes was found to be 5,300, the counts being made at 11 a. m. According to the best authorities, the average number of leucocytes is 7,500, or 2,300 more than was found in these inebriates. In the steady drinkers the average count was 5,000, while in the periodic alcoholics the counts averaged 6,500. Differential counts showed no change in the ratio of the different forms of leucocytes. It would seem, therefore, that alcoholics have a smaller number of leucocytes in their blood than is normal, and, in view of the frequent failure of leucocytosis to develop in alcoholic pneumonia, it may be that the structures that form leucocytes are impaired by alcoholism.

Medical News.

GEORGIA.

Off for Europe.—Dr. Floyd W. McRae, Atlanta, has sailed for Liverpool on the *Cymric*.

Convicted.—Dr. George W. Barrow, Americus, has been convicted of assault with intent to commit murder, in a criminal operation, and has been sentenced to imprisonment for four years in the penitentiary.

Medical Scholarships Awarded.—The governor has appointed 26 young men to the beneficiary scholarships in the Medical College of Georgia, Augusta, a branch of the state university, 4 at large, and 2 from each congressional district.

The Hospital Graduates Club has just been organized in Atlanta. The membership is limited to those men who, in addition to thorough collegiate training, have served as interne or resident for at least one year in a hospital. The following

1. Journal of Infectious Diseases, May 30, 1904, p. 425.

are the charter members: Marion McH. Hull, Stephen T. Barnett, Frank K. Boland, W. Troy Bivings, Willis B. Jones and Fred G. Hodgson.

Closer Union with University.—At the recent session of the University of Georgia trustees plans were made for the closer union of the university and the medical college at Augusta. All students of the medical college will hereafter be registered as regular students of the university, and the professors at Augusta will accept the marks given university students who may afterward enter the medical college as taking the place of examinations there.

ILLINOIS.

Personal.—Dr. George N. Kreider, Springfield, has been re-elected editor of the *Illinois Medical Journal*.

Kewanee Hospital Dedicated.—The new St. Francis Hospital, Kewanee, which has been erected at a cost of $160,000, was dedicated, July 24, with impressive ceremonies. Bishop Spalding made the dedicatory address.

The Alleged Trouble at Elgin.—Notwithstanding the lurid tales of trouble and mismanagement at the Illinois Northern Hospital for the Insane, Elgin, the superintendent writes: "We have all the attendants we can use, and are running along smoothly."

Tuberculosis Hospital Opens.—The new consumption hospital at Dunning was turned over to the officials, July 2, and three days later all the patients in the old building were transferred. The new hospital consists of five cottages and will accommodate 160 patients. The old building will be used as a hospital for the sick insane.

Chicago.

Chicago to St. Louis.—Profs. Elias P. Lyon, Charles H. Neilson and Orville E. Brown of the department of physiology in the University of Chicago, have resigned to accept similar positions on the faculty of the University of St. Louis.

Death from Poison Ivy.—A death from ivy poisoning—an extremely rare event, especially among adults—is reported. A man 42 years old died in St. Joseph's Hospital July 21, after two months of intense suffering from this affliction.

Davis Will Filed.—The will of the late Dr. N. S. Davis disposes of an estate valued at $30,000, of which $25,000 is real estate. The homestead is bequeathed to his widow, his library to his son, and a perpetual scholarship in Northwestern University, to his grandson, Frank H. Davis.

Heat Increases Deaths.—The few days of excessive heat had a disastrous effect on the public health, increasing the total deaths from 416 the week before to 536, or more than 29 per cent. The increase—122—was almost entirely among those under 5 years of age—212 as against 115 the week before. Acute intestinal diseases caused 119 deaths; consumption, 66; violence, 49; Bright's disease, 33; heart diseases, 26; pneumonia, 25; nervous diseases, 21; cancer, 19; and sunstroke, 17.

Smallpox.—Three cases of smallpox were sent to the Isolation Hospital during the week ended July 23, and a fourth one was found which had recovered at home, without the nature of the disease being recognized by the attending physician. From this unrecognized case many exposures resulted, and some of the cases now in the hospital contracted the disease from this source. Three of these cases never had been vaccinated; one had a mark made in childhood twenty-three years ago. One death occurred at the hospital during the week—an unvaccinated groceryman, 26 years old. His unvaccinated child, three months old, is in the hospital with smallpox. His vaccinated wife—now a widow—is in the hospital nursing the child.

KENTUCKY.

Ill and Injured.—Dr. and Mrs. J. H. Heavrin, Harvesville, have been seriously ill from ptomain poisoning.——Dr. J. P. Wheeler, Prestonsville, was thrown from his buggy recently and sustained severe contusions and the fracture of a small bone of the face.

Hospital and College Additions.—The Louisville National Medical College has completed extensive additions to its hospital.——An adjoining building has been purchased and equipped as a free dispensary. A new dormitory for men has been added, and new laboratories have been installed.

Personal.—Dr. Philip F. Barbour, Louisville, sailed on the *Teutonic*, July 6.——Dr. Charles W. White, Covington, has been re-elected health officer.——Dr. Cleon C. Owens has been succeeded as first assistant physician of the Central Kentucky Asylum for the Insane, Lakeland, by Dr. Malcolm H. Yeaman.——Drs. William A. Young, Dayton, J. G. Yeatsey, Newport, and J. Frank Houston, Alexandria, have been made members of the Campbell County Board of Health.——Dr. Sidney J. Meyers has resigned as professor of pathology and hygiene in Kentucky University to become professor of medicine, clinical medicine and hygiene, in the Louisville Medical College.——Dr. Louis S. McMurtry sailed for Liverpool July 29 on the *Arabic*.

Commencements.—The Medical Department of the University of Louisville graduated a class of 16, July 1. Dr. H. A. Cottell delivered the faculty address, and the dean, Dr. James M. Bodine presented the graduates to Hon. Theodore L. Burnett, who conferred the degrees.——The largest class in the history of the Hospital College of Medicine was graduated, July 1, when a class of 99 received degrees from Rev. Francis R. Beattie. Dr. Louis L. McMurtry, president of the college, told of the work of the year and of what the future should bring.——A class of 57 was graduated by the Kentucky School of Medicine July 9. Capt. John H. Leathers conferred the degrees and Dr. William H. Wathen, president of the institution, reviewed the past and present methods of medical practice.

Nostrum Vendors Shut Out.—The section added by the last legislature to the law regulating the practice of medicine, went into effect last month. It is as follows:

Sec. 8.—Any itinerant medical company of two or more persons traveling as a troupe or company as vendors of any drug, nostrum or instrument of any kind, intended for the treatment of any disease or injury, or who shall, by any writing or printing, profess to the public to treat disease or deformity by the use of any drug, nostrum or instrument, shall pay to the board a license of $125 per month, which shall be at once covered into the state treasury. The board shall issue a license to reputable and worthy applicants under this section on payment of the fee each month, but may for sufficient cause refuse such license. Any such itinerant vendor traveling as a company or troupe, with two or more persons as members or in its employ, who shall treat or profess to treat or cure diseases or injuries by the use of any drug, nostrum or instrument without license to do so, or shall sell the same for such purpose, in violation of this section, shall be fined $50 for the first offense, and on each subsequent conviction shall be fined $100.

Honor Dr. McMurtry.—The physicians of Louisville, to celebrate the selection of one of their number as presiding officer of the American Medical Association and to do honor to their representative, gave a banquet to Dr. Louis S. McMurtry, the recently elected president. Dr. William H. Wathen was chairman of the committee of arrangements, and Dr. William Bailey toastmaster. The following toasts were responded to: "Distinguished Men in Medicine," Dr. John A. Ouchterlony; "Medical Organization," Dr. Joseph N. McCormack, Bowling Green; "Surgery of the South," Dr. H. H. Grant; "The Successful Man in Medicine," Dr. Joseph M. Mathews; "Medical Education in the South," Dr. Clinton W. Kelly; "The Young Man in Surgery," Dr. John R. Wathen; "The Medical Man of Yesterday and Today," Dr. J. G. Sherrill; "Fraternalism in Medicine," Dr. T. P. Satterwhite; "The American Medical Association," Dr. Louis S. McMurtry. Dr. Charles A. L. Reed, Cincinnati, made an eloquent impromptu response to a toast. About fifty-five were present at the banquet.

MARYLAND.

Personal.—Dr. John Mace has been elected health officer of Cambridge.——Dr. John Sappington of Darlington suffered a stroke of paralysis July 2.

Only One Case in The State.—There is a case of smallpox at Hurlock, which the State Board of Health says is the only one in the state, although there are several convalescents.

Baltimore.

Deaths of the Week.—There were 250 deaths the week ended July 23, of which 57 were from cholera infantum.

Superintendent Resigns.—Dr. A. Aldridge Matthews, superintendent of the University of Maryland Hospital, has resigned and gone to Spokane, Wash., to practice.

Off for Europe.—Drs. Harvey Cushing and Thomas McCrae will attend the meeting of the British Medical Association.——Dr. Robert Hoffman has gone to Berlin.——Dr. Myer W. Aaronson has gone to Europe to spend three years in study.

Summerings.—Dr. Walter B. Platt has gone to Lake Champlain to fish and camp.——Dr. L. McLane Tiffany is at Manchester, Mass.——Dr. William Green is at Bar Harbor, Maine.——Dr. J. Albert Boyles is spending some weeks in Rhode Island.——Dr. Henry M. Cook is at the Sweet Springs, W. Va.——Dr. Thomas B. Futcher is at Newport.——Dr. William A. B. Stillman is spending the month in Cecil County.——Dr. M. L. Price has gone to Boston.——Dr. Thomas S. Cullen is at Halifax, N. S., where he delivers an address before the Maritime Medical Association.——Dr. Thomas J. Ward is at East Stroudsburg, Pa., for the summer.——Dr. William T. Howard

left for Bedford Springs July 8.——Dr. Nicholas L. Dashiell will spend August at Ocean City.

NEW YORK.

Typhoid at Watertown.—Typhoid fever has broken out at Madison Barracks, Watertown, and ten soldiers of the Ninth Infantry are in the hospital as a result of five days' epidemic.

Will Go to China.—Dr. and Mrs. Charles K. Roys, Lyons, sail from San Francisco on August 13, for China, where Dr. Roys will assume charge of a new hospital at Wei Haiwei, Shantung.

Buffalo Personals.—Dr. William F. Bock has been appointed a medical examiner in Lunacy.——Dr. Eugene Wasdin, on the eve of leaving for his new post of duty in Memphis, was presented with a handsome silver loving cup by the staff of the Sisters' Hospital.——Dr. Burt C. Johnson has been successfully operated on for appendicitis.——Drs. Lucien Howe and Frank W. Hinkel have sailed for Europe.——Drs. Lawrence G. Hanley and Charles G. Stockton will spend several weeks in Europe.

Hinder the Medical Society Merger.—The almost completed consolidation of the New York State Medical Association and the Medical Society of the State of New York is opposed by the Onondaga County Medical Association. Their representative appeared before the justice to oppose the motion for an order compelling the association to consent to union. He said that there was no real opposition to the consolidation, but that his clients believed the merger should be carried out in accordance with the terms of the general corporation law, by which each association would be wound up prior to the establishment of the new organization.

Tuberculosis Hospital Open.—The State Hospital for the Treatment of Incipient Tuberculosis is now open at Raybrook, with Dr. John H. Pryor, Buffalo, as superintendent, and Dr. Willis E. Merriman, Jr., Albany, resident physician. The hospital will accommodate about fifty patients. There will be a camp of tents to accommodate forty-four patients. Persons who can afford to pay will be charged cost. The examiners in Albany are Drs. Samuel B. Ward and George E. Gorham. Under the law no person shall be admitted to the institution unless he or she has been a resident of the state for one year. Persons desiring free treatment apply to the local authorities, who thereon issue a written request to the superintendent; then they are examined by the medical examiners and admission to the hospital is made in the order in which the names of the applicants are received. They are transported to and from the hospital free. Applicants for admission who are able to pay should apply in person to the superintendents.

New York City.

Heavy Infant Mortality.—For the week ended July 23, there were 279 more deaths from diarrheal diseases than for the corresponding week of 1903, and this increase in infant mortality increased the annual death rate to 23.46 per 1,000.

Medal for Sanitary Superintendent.—Dr. Charles F. Roberts, sanitary superintendent of the Health Department, on July 1, received a medal from his associates commemorating his thirty-six years' service in the department. Dr. Darlington made the presentation address.

Medical Inspectors Begin Work.—Between twenty-five and thirty medical inspectors have commenced their regular summer visits to the tenements in the crowded downtown sections of Brooklyn. Their chief duty is to advise mothers in the care of infants and young children and the proper method of diet during the hot weather.

Help Needed for Babies.—St. John's Guild has issued an appeal for assistance. A floating hospital goes out from the city every day with its wards crowded to the limit of their capacity, and every bed at the Seaside Hospital is occupied. Already this summer as many patients have been treated as were admitted during the whole of last summer.

Contagious Diseases.—There were reported to the sanitary bureau of this city for the week ended July 16, 390 cases of tuberculosis, with 134 deaths; 309 cases of diphtheria, with 41 deaths; 269 cases of measles, with 13 deaths; 60 cases of typhoid, with 10 deaths; 80 cases of scarlet fever, with 7 deaths; 16 cases of varicella, and 23 deaths from cerebrospinal meningitis.

Eastward Ho.—Dr. and Mrs. Francis J. Quinlan sailed on the *Kaiser Wilhelm der Grosse*, for Cherbourg, July 19.——Dr. and Mrs. J. C. Cardwell, Brooklyn, sailed on the *Prinz Oskar* for Naples, July 19.——Dr. and Mrs. George T. Wetmore sailed on the *Potsdam*, for Boulogne, July 19.——Dr. and Mrs. George I. McKelway, Flushing, sailed on the *Finland* for Antwerp, July 19.——Dr. J. Herbert Claiborne sailed on the *Etruria* for Liverpool, July 23.

Rest-Cure House for Consumptives.—Dr. Darlington, commissioner of Health, has announced that another addition is to be made to the Consumptive's Hospital, on North Brother's Island, in the shape of a "rest-cure" pavilion. There are three buildings on the island devoted to the housing and treatment of tuberculosis patients. The new building is to be a pavilion with movable sides, so that patients may sit therein, and get plenty of air without being directly in the wind.

Street Sprinkling vs. Flushing.—The commission of the street cleaning department has contended that sprinkling did no good, only making the streets slippery, and that facilities should be provided for flushing instead. As a result of this stand, the medical advisory committee of the board of health met Commissioner Darlington, at the request of Mayor McClellan to consider this question. A resolution was passed recommending that the practice of sprinkling the streets be continued.

Committee for the Study of Pulmonary Diseases.—Dr. Darlington, health commissioner, has selected a part of the investigating committee for the study of lung diseases, for the work of which $10,000 was appropriated. Among these are Drs. Edward G. Janeway and T. Mitchell Prudden, of New York City, Drs. William H. Welch and William Osler of Baltimore, and Dr. Theobald Smith of Harvard University. They will begin work as soon as possible, in the hope of attaining some definite results before cold weather.

OHIO.

Painesville Hospital Opened.—The new hospital at Painesville was opened July 8. The licensed physicians of Painesville Township have been named as the medical staff.

Held Up and Robbed.—Dr. John E. Darby, Cleveland, was held up by two highwaymen while making a night call, July 4, and robbed of $30 and a gold watch. The robbers returned Dr. Darby's surgical case, but retained his medicine case.

Cincinnati Tourists.—Dr. Henry A. Ingalls has left for a three weeks' trip to Mexico.——Dr. Meyer L. Haidingsfeld has left for Europe and will return about the middle of October.——Dr. John C. Mackenzie is spending his vacation in Alaska. He will return by way of Yellowstone Park.

Personal.—Dr. John M. Buckingham has been made health officer of Springfield, vice Dr. Henry H. Seys, deceased.——Dr. John K. Scudder, Cincinnati, has been appointed a member of the State Board of Medical Registration and Examination, vice Dr. Leo F. Towers, Toledo, resigned.——Dr. Henry R. Mallory has been reappointed a member of the Hamilton Board of Health.——Dr. T. Clark Miller has been appointed health officer of Massillon.——Dr. Charles A. L. Reed, Cincinnati, has sailed for Europe.

Staff Appointed.—The following staff appointments have been made by the executive committee of the Marion City and County Hospital: Special staff—Drs. Horatio Chisholm, Auguste Rhu, and James W. McMurray, all of Marion; general staff—Drs. Robert S. Dombaugh, Waldo, Clyde R. McKinnies, Marion, James A. McMurray, Marion, Joel B. Taylor, Marion, Robert C. M. Lewis, Marion, Lewis D. Hamilton, Marion, Samuel H. Britton, Marion, Dana O. Weeks, Marion, and Eben L. Brady, Marion.

Physicians' Signatures Alone of Value.—The assistant city solicitor of Cincinnati has recently rendered an opinion that will be of some interest to physicians. Information was wanted by the Bureau of Vital Statistics whether the signature of an Eddyite or an osteopath to a death certificate was to be regarded as equivalent to that of a recognized physician. The opinion is that inasmuch as Eddyites and osteopaths are not recognized by the courts and statutes as legal practitioners, and inasmuch as they profess no knowledge of medicine, their opinion as to the cause of death can be of little value to the officials. Their signatures, therefore, signify no more than would those of other laymen. In cases that they have attended alone and where death has resulted, the coroner must be called to determine the cause of death.

PENNSYLVANIA.

Philadelphia.

The Medical Society of the Woman's Hospital of Philadelphia was organized, June 30, at a meeting of the medical staff. Dr. Mary W. Grissom was elected president.

Hospital Improvements.—Extensive improvements are to be

made to the German and Presbyterian hospitals. The latter institution will be extended by the erection of a four-story and basement maternity. The German Hospital will be improved by the addition of a new dining room, a dormitory kitchen, and the fitting up of a new diet kitchen.

June Hospital Work.—During June 103 patients were treated in the wards and 2,910 in the dispensaries of St. Agnes Hospital.——During the same period 212 patients were treated in the wards of St. Mary's Hospital and 2,600 were treated in the dispensaries.——In St. Joseph's Hospital 320 patients received attention in the wards and 3,000 in the dispensaries.

Personal.—Drs. Charles P. Noble and Ralph W. Seiss sailed for Europe July 16.—Dr. George F. Messer and family sailed July 24.——Dr. William M. Sweet has been appointed professor of ophthalmology in the Polyclinic Hospital and College, to succeed Dr. Howard F. Hansell, resigned, and made emeritus professor.——Dr. William L. Rodman has gone to England to attend the meeting of the British Medical Association at Oxford.

A Year of the Free Hospital for Poor Consumptives.—During the year ended March 1 this hospital treated 569 patients. Of this number 46 were treated in the hospital and the remainder at the White Haven Sanitarium. The average number of weeks of maintenance in the city institution was 9; at White Haven 13. The total cost of the work for the year was $33,691.56, or an average of $5 a week for each patient. The work is somewhat embarrassed by the lack of funds. An appeal has been made to the public by the treasurer, Edward A. Millar, 404 Walnut Street.

Bequests.—By the will of Mrs. Eleanor Cooper $10,000 was left to the Presbyterian Hospital to endow a private room and $5,000 to endow a free bed. The same testator bequeathed $10,000 to the Arnot Ogden Hospital of Elmira, N. Y., to endow two free beds; $500 to the Cooperstown, N. Y., Orphan Asylum, and $10,000 to the medical department of Columbia University.——By the will of Sarah McCann the following charitable institutions have been benefited: St. Joseph's Home for Boys, $300; St. Vincent's Maternity Hospital, $200, and St. John's Orphan Asylum, $100.

City to Disinfect Sewage.—Plans are on foot for the construction of intercepting sewers along the line of the Delaware and Schuylkill rivers, to prevent pollution of the city's water supply. The various sewers of the city will be drained into these channels instead of into the river as at present. The method of treating the sewage will be by collection and filtration. The receiving plant will be covered, and the odor will be overcome by placing jets in the roof of the basin and burning the gas. The law department takes the view that if the city should dispose of its own sewage the authorities would be free to take legal action against any municipality which pollutes the water supply.

Health Report.—The general death rate of the city remains high, due to the extreme heat. Contagious diseases are not prevalent, and smallpox is apparently stamped out, no new cases having been reported during the week. Only 7 cases are now under treatment in the municipal hospital, and these are all convalescing. Typhoid fever is also on the decline, although still more widespread here than in the other large cities. For the week there were 41 cases of diphtheria reported, with 4 deaths, 43 cases of scarlet fever, and one death; 65 cases of typhoid fever and 11 deaths, and 52 deaths were due to tuberculosis. The total number of deaths reported for the week were 482. This is one less than last week, and 18 less than for the corresponding period of last year, but 8 more than for the same period of 1902.

Cancer Hospital Projected.—Plans for the founding in this city of a cancer hospital of national scope were formulated at a meeting of physicians and philanthropic citizens July 21. The proposed institution is to be known as the American Oncologic Hospital, and application is to be made for a charter. The following are to be the incorporators: George H. Earle, Jr., George H. Stuart, Jr., Rev. Floyd W. Tompkins, D.D., Frank L. Patterson, Dr. Beardman Reed, Richard Cadbury, Dr. G. Betton Massey, Charles H. Oberge, R. K. Wilbur, C. Wilson Roberts, Dr. Howard R. Swayne, Dr. Addinell Hewson, Jr., W. Calvin Moore, and Dr. C. M. Desverzine of Havana, Cuba. The hospital is to be devoted exclusively to the treatment of tumors and malignant growths, and to scientific research into the causes underlying the recent rapid increase in the prevalence of the disease. Statistics quoted at the meeting showed that 906 persons died of cancer in this city last year. This is 33 less than the number of deaths from cancer in all of the seven largest cities of this country in 1870 combined. It was stated that 2,806 cases exist in this city at the present time, and that there are 11,302 cases in the state. A temporary organization was formed with the following officers: President, George H. Stuart, Jr.; secretary, C. Wilson Roberts; treasurer, Richard Cadbury.

GENERAL.

American Association of Obstetricians and Gynecologists.—This body will hold its seventeenth annual meeting at the Hotel Monticello, St. Louis, Sept. 13-16, 1904. The president is Walter Blackburn Dorsett, St. Louis, and secretary, William Warren Potter, Buffalo.

Marine-Hospital Service Examination.—The next examination of candidates for assistant surgeonships in this service will be held at the Bureau, 3 B Street, S. E., Washington, D. C., Oct. 3, 1904, at 10 a. m. Candidates must be between 22 and 30 years of age, graduates of reputable medical colleges, and must furnish testimonials from responsible persons as to their professional and moral character. The examinations are: 1, physical; 2, oral; 3, written; 4, clinical. On appointment the young officers are, as a rule, first assigned to duty at one of the large hospitals, as at Boston, New York, New Orleans, Chicago, or San Francisco. Assistant surgeons receive $1,800. The tenure of office is permanent. Other particulars have been given in THE JOURNAL previously. For further information, or for invitation to appear before the board of examiners, address the Surgeon-General at the above address.

Kitasato to Visit the St. Louis Fair.—Dr. Kitasato of Japan has accepted the invitation of the Congress of Arts and Sciences to attend the International Congress at St. Louis in September. He is one of Japan's most noted scientists. After graduating from the medical college of the Imperial University of Tokio Dr. Kitasato was sent by the Japanese government to Germany to complete his studies. While in Germany he discovered the bacillus of tetanus. After returning to Japan he established the Institute for Infectious Diseases, which was opened in 1892. In 1894 Dr. Kitasato was a member of the commission sent by the Japanese government to study the plague in Hongkong, and while there discovered the bacillus causing the disease. In 1896, under the instructions of the government, he established the Imperial Serum Institute. He was also appointed president of the Imperial Lymph Institute. Dr. Kitasato also holds the following government appointments: Vice-president Central Hygienic Association and adviser to the sanitary bureau charged with the work of preventing the transportation of infectious diseases to Japan. He is also president of the Japan Private Hygienic Society and honorary member of the American Society of Tropical Medicine, and of other scientific associations, both domestic and foreign. A picture of Dr. Kitasato appears in THE JOURNAL this week, page 322.

FOREIGN NEWS.

Memorial to Kahler at Vienna.—A portrait bust of Otto Kahler, 1848-1893, was recently unveiled with much ceremony in the arcades of the Vienna faculty of medicine. Nothnagel and Kraus reviewed his work in internal medicine, and his life career in general.

Retirement of Vogl at Vienna.—After forty years of academic labors Professor A. von Vogl's retirement from the chair of pharmacology at Vienna was made the occasion of an ovation July 2. Addresses were delivered by Chrobak and others and a *Festschrift* was presented.

The Kussmaul Endowed Prize.—Professor Czerny has endowed a prize in honor of his deceased father-in-law, the famous clinician, Adolf Kussmaul. The sum of $2,500 has been paid for the purpose to the Heidelberg University, and the income will be awarded every third year, on Kussmaul's birthday, February 22, for the best therapeutic achievement during the preceding three years, published first in German literature. ("Für die beste therapeutische Leistung welche sich im Laufe der letzten 3 Jahre bewährt hat.")

Official Classification of Diseases in Germany.—The new official decree establishing the classification of diseases for purposes of notification and vital statistics for Prussia has just been published. It is given in full in the *Münch. med. Wochenschrift* for June 14, filling four pages. There are 6 groups of possible causes of death, with 176 titles and numerous subtitles. The first group includes the infectious diseases, the zoonoses and parasitic affections. The rubric "zoonoses" includes merely the four diseases, hydrophobia, anthrax, glanders and foot and mouth disease. The parasitic affections are subdivided as due to worms, to the ray fungus and to mycelium

fungi. There is a still minuter classification by the kind of type used. Tuberculosis has subtitles from 0 to 6, with a few subdivisions.

Damage Suit Brought by 98 Physicians Against a Medical Official.—Dr. A. Pfeiffer occupies a high official medical position at Wiesbaden, and bears the titles of Regierungsrath and privy medical councilor. The courses for free post-graduate instruction have been in his charge and proved extremely successful two years ago. Last year Dr. Pfeiffer accused a local laryngologist, Dr. Fischenich, of unethical conduct, and made complaint to the government. The local medical organizations took the matter up and "boycotted" the post-graduate courses, after making a formal protest to the government and asking for Pfeiffer's discharge. The strife between the local physicians and Pfeiffer culminated at last in a suit instituted by the ninety-eight physicians comprising the Medical Chamber, against Dr. Pfeiffer, asking damages for libel. The suit was finally decided, June 30, and Dr. Pfeiffer was fined 3112 and costs, while his countersuits against the officers of the Medical Chamber were dismissed.

LONDON LETTER.

The Health of Hong Kong.

The annual report on the health and sanitary condition of Hong Kong, by Dr. J. M. Atkinson, principal civil medical officer, has been issued. In 1903 there were notified 1,415 cases of plague against 460 in the previous year. The disease markedly declined when the minimum temperature reached 82 F. The minimum number of cases occurred in December, when only 2 were recorded, and the maximum in May, when 515 were reported. The treatment by 12-grain doses of carbolic acid administered every two hours is still in favor, and appears to give encouraging results. Of 101,056 rats examined, 3,744 were found to be infected with plague. The prevalence of the disease in rats and man increased and declined coincidently. Dr. Hunter, health officer of Hong Kong, intends to make Haffkine's prophylactic in Hong Kong to prevent the risk of contamination in the voyage from India.

Plague in Johannesburg.

Mr. W. C. C. Pakes, medical officer of health, Rand plague committee, has issued a report on the epidemic of plague in Johannesburg, which in many respects is of great interest and importance. In consequence of plague having existed for many months on the south and east coasts of South Africa arrangements were made in Johannesburg to cope with it in case the Transvaal should be invaded. These consisted in appointing (1) a special plague officer at Volkrust (the first town on the Natal line of the Transvaal); (2) the establishment of an observation camp; (3) a general supervision of Asiatics; (4) as early as February, 1903, the health officer of Johannesburg sent out circulars to the doctors containing extracts from the plague memorandum by Mr. R. H. Power, describing the symptoms of the disease and giving full directions for obtaining and forwarding for bacteriologic examination material from suspected cases. He recommended, and the government in connection with the town council organized, a plague camp, to which all cases of plague, known or suspected, were to be transferred. The government laboratories were specially developed in order to be able to perform the bacteriologic diagnosis of plague on a large scale. In January, 1903, the manager of the Central South African railways was requested to issue instructions to all his employees to look out for dead rats and to have them forwarded to the government laboratories for diagnosis. The Johannesburg municipality appointed a professional rat-catcher, and all dead rats found by him were forwarded for examination. The first intimation of the existence of plague in the Transvaal was the finding in April, 1903, of a dead rat in Johannesburg, which was ascertained to have succumbed to plague. Subsequently 13 rats were found to have died from plague in different parts of Johannesburg and the most careful inquiry failed to reveal the slightest connection between any two spots from which they were obtained. The inevitable conclusion was that they were imported singly from the coast in grain or forage. Each place from which a plague stricken rat was taken was visited by the rat-catchers and disinfectors and cleaned up. Only once was a second rat obtained from the same place. The authorities did not confine their attention to rats; cats, dogs, ducks, fowls, and small birds were examined, but with negative results, except in the case of one cat, which was found to have died from plague. Not until March 18, 1904, was plague discovered in men. A large number of sick persons were found collected together in the coolie location. The assistant district surgeon reported that they were suffering from pneumonia. On the 19th five corpses and twelve sick persons were found in a four-roomed house. The necropsies revealed nothing inconsistent with the diagnosis of pneumonia. There was not a single classical symptom of death from plague; the spleens were not enlarged or markedly congested; there were no ecchymoses or hemorrhages, and except the lungs the organs were normal. The latter showed patchy consolidation of the lobular type, and in spite of careful search no enlarged glands were found. But bacteriologic examination of portions of lung showed organisms morphologically identical with the plague bacillus. Owing to the insanitary condition of the coolie location and to the unknown number of cases in it a cordon was established around it at 4 a. m. on the 20th. By 9 a. m. further deaths had taken place, making a total of 26 in 36 hours. A remarkable fact was that not a single case showed any signs of buboes. The whole population of the coolie location—1,800 Asiatics, 1,338 natives, and 142 colored persons—were transferred to a segregation camp outside the town. During the incubation period of the disease only one death from plague occurred. After twelve days the inhabitants of the segregation camp were allowed to come and go under nominal restrictions. April 8 the coolie location was burned to the ground. To prevent the escape of rats, cats, dogs, fowls, and other creatures a galvanized iron fence was put up around the location, and the various animals and birds which had not been previously caught and destroyed were then caught, killed and burned. In the main the recommendations of the Durban Plague Congress were carried out. "Contacts" were not segregated; but were kept under observation, and their movements limited to the least possible extent. "Suspects" were isolated in a suspect camp adjoining the plague camp. The natives working in the mines were inspected daily, and any found sick were examined by the medical officer of the mines. No Asiatic was allowed to travel by rail unless he had received a clean bill of health from the health officer. The total number of deaths from plague up to April 23 was 766 in whites, 52 in Asiatics, and 16 in natives.

The Congo Expedition of the Liverpool School of Tropical Medicine.

In September last, at the request of the king of the Belgians, the Liverpool School of Tropical Medicine dispatched an expedition to the Congo Free State for the purpose of studying trypanosomiasis or sleeping sickness. The expedition consisted of Drs. J. E. Dutton and J. L. Todd, who formed the recent trypanosomiasis expedition of the School to Senegambia, and Dr. C. Christy, who was a member of the Royal Society's commission to Uganda to study sleeping sickness. The expedition proceeded to Bomba, where they stayed until the end of the year, and the Belgian authorities attached to them a state medical officer, Dr. Heiberg, a former student of the Liverpool School. The expedition made a long stay at Leopoldsville, where the government built a special hospital for the study of cases of sleeping sickness. Observations were made under the most favorable conditions extending over several months—an advantage never before enjoyed by previous observers. A large amount of material was available, allowing a close study of all the different types of cases. Dr. Christy left for home on May 1, bringing with him to Europe three natives suffering from sleeping sickness.

The Census of India in 1901.

The census of India, taken in 1901, has just been published in two bulky volumes. This is the third and the most complete census of India. The gigantic nature of the task of numbering nearly 300 millions of people inhabiting a territory of 1,766,597 square miles may be conceived. There has been a steady, but slow increase of population from 1872 to 1901; in the decade from 1891 to 1901 the increase amounted to only 1.5 per cent. The smallness of the increase is partly accounted for by famines and the plague and other epidemic diseases. A curious fact is that, while with few exceptions the females outnumber the males in all European countries, in India the reverse is true: there are only 963 females to 1,000 males. A satisfactory feature of the report is a decided and continuous decrease in the last twenty years in certain afflictions—insanity, deaf-mutism, blindness, and leprosy. This decline is ascribed to better sanitation and medical relief and improved system of food supply in times of famine. There is little insanity in India; Eurasians and Parsees are most affected. The mental strain of severe competition, which is a cause of this disease in Europe, has no place in the East. The doctrine that

consanguineous marriages have a tendency to produce mental unsoundness receives little support from the census figures.

Visit of French Physicians to London.

A visit of leading members of the French profession to London has been arranged, to include Professors Bouchard, Lucas-Championnière, Chauffard, Landouzy, Lermoyez, Marie and Sebilleau. It is understood that they desire especially to observe the system of clinical teaching and study in London. Visits to the Royal College of Surgeons, the Lister Institute, and the laboratories on the Embankment will be arranged. A banquet will be given to the visitors, and committees of entertainment and escort are appointed.

Mr. Chamberlain and Preventive Medicine.

The Royal Institution of Public Health has given a banquet to Mr. Chamberlain in recognition of his services to preventive and tropical medicine while filling the office of colonial secretary. Dr. W. R. Smith, the president of the institute, in proposing Mr. Chamberlain's health, said that they were greatly indebted to him for the great progress made in various branches of research. Through his agency the London School of Tropical Medicine was founded. In replying Mr. Chamberlain dwelt on the importance of sanitary reform. Wherever British rule was established sanitary problems arose. His attention and sympathies were given to the efforts of such men as Manson, Ross, Haffkine and others, who devoted their time to tropical medicine and research. They were great assets of the empire, and in time he believed their work would make those tropical climates, which had been such in turn the white man's grave, places in which he could live in comfort. That was the reason why an unknown student working in the laboratories of London or Liverpool might do more for the empire than any statesman, however eminent his position.

DUBLIN LETTER.

Trinity College Postgraduate Session.

Following the example of many American and a few English schools, Trinity College has just arranged for next month a short post-graduate course in the various subjects of medical study. Many of the best teachers in Dublin are giving their services, and clinical and systematic teaching will be given in medicine, surgery, gynecology, physiology, pathology and anatomy. Among others engaged in the work are Mr. Swanzy, the ophthalmic surgeon.

Post-Graduate Work in Dublin.

Following the example of Liverpool the University of Dublin this year inaugurated a short post-graduate course of study in various subjects of medical interest. The entire course lasted three weeks and instruction was given in clinical medicine and surgery, pathology, physiology, anatomy, *x*-ray surgery, diseases of the skin, eye, nose and throat, and gynecology. Many of the best-known teachers in Dublin offered their services, and considering the very short notice given of the course, a large number of medical men availed themselves of it.

Correspondence.

Poisoning by Picrotoxin.

CHICAGO, July 11, 1904.

To the Editor:—IN THE JOURNAL, July 2, is an editorial on poisoning by picrotoxin which is very misleading. (In an ordinary journal write-up it would cause little harm; but an editorial writer is supposed to be posted on his subject.) The stomachs examined by the original author had been deluged with cheap beer, in which malt and hops had been charily used. In their stead had been used a surrogate composed principally of quassia, gentian, colocynth, aloes, wormwood and *Cocculus indicus*. It is thus easy to see where the picrotoxin found in the stomachs of persons dying of acute alcoholism came from. To allow your readers to make statements and give THE JOURNAL as authority on this subject, as presented by you, would make both appear ridiculous, is why I attempt to correct it.

ALMERIN W. BARR.

[NOTE.—We are unable to see in what way our editorial is misleading. We directed attention to the possibility of poisoning by *Cocculus indicus*, or by its active principle, picrotoxin. While formerly the use of the drugs mentioned was common as hop substitutes, they are rarely if ever now employed. As the Minnesota experience, however, indicates, cocculus is and has been used for "dope," especially in lumber and mining camp districts, for criminal purposes, and the fact that quantities of the "fish berries" are sold and may easily be obtained, practically without any restriction, strengthens this belief. We do not agree with the assertion that the toxic symptoms described could be derived from the amount of cocculus that might possibly be found naturally in even the very worst kind of beer.—ED.]

The Effect of Digitalis on Cardiac Hypertrophy.

PHILADELPHIA, July 16, 1904.

To the Editor:—I have been much interested in reading an article on this subject by Dr. Wynn in THE JOURNAL, July 16. Aside from my interest in matters therapeutic, my attention was called to this article by reason of the fact that some years ago I published a research which seemed to show that digitalis in moderate dose is capable of producing a very distinct increase in the cardiac muscular fibers, provided that the use of the drug is continued for a long period of time. My results at that time seemed a little more positive than those of Dr. Wynn, although I am again interested to note that in the animals which he employed the hearts weighed more when digitalis had been given than in those animals which did not receive the drug. In regard to the doses named in Dr. Wynn's article, I think there must be a misprint. If a Belgian hare which weighs 2½ kilos, or approximately 5½ pounds, receives 90 drops of tincture of digitalis a day, this dose would be equivalent to the use of almost three ounces of tincture of digitalis per day by a man weighing 165 pounds. Finally, it is interesting to note that such peaceable animals as Belgian hares become ferocious under the use of three large doses of digitalis, for in my experiments, made on pigs, the same change in temper took place.

H. A. HARE.

[NOTE.—We referred the question of whether an error had occurred to Dr. Wynn, who replied as follows.—ED.]

INDIANAPOLIS, July 21, 1904.

To the Editor:—The letter of Dr. Hare is pertinent, in view of the statement made in my article that 90 drops of tincture of digitalis were administered daily to the rabbits. The animals did receive approximately this amount, but only for a day or two, for they manifested vomiting and anorexia—refusing food for two or three days. The average daily dosage for the whole period was about 10 drops. When the dosage had been increased to about 35 drops without disagreeable symptoms I began to doubt the preparation, and gave a tincture made by another well-known firm, but without any difference. Then I directed my assistant, who is exceedingly careful and reliable, to increase the dosage rapidly until toxic symptoms appeared. This rapid increase in the dosage extended over a period of ten days. The great tolerance of the animals to the drug was to me one of the most striking features of the experiment.

FRANK B. WYNN.

Data Wanted on Dentition Periods in Relation to Convulsions.

SONYEA, N. Y., July 5, 1904.

To the Editor:—Will you be good enough to say in THE JOURNAL that I am especially anxious to get accurate data on the influence of the dentition periods in the production of convulsions, especially epilepsy; and that I would be grateful to any physician who would be kind enough to send such data to me? Facts in connection with the influence of the first dentition period from the sixth month to the end of the first year, or thereabouts, are especially desired. W. P. SPRATLING.

Petroleum Internally Not Endorsed by American Therapeutic Society.

[THE JOURNAL has received for publication the following copy of a letter.—ED.]

WASHINGTON, D. C., July 20, 1904.

HILLSIDE CHEMICAL COMPANY, Newburgh, N. Y.

Gentlemen:—At the regular annual meeting of the American Therapeutic Society, held in New York City in June, 1904, the

society determined to call your attention, as well as that of the profession, through the columns of THE JOURNAL of the American Medical Association, to the error you make in your advertising literature.

To quote from leaflet "Petroleum Internally: Its Action"; "Already, at the second annual meeting of the American Therapeutic Society, held at Washington in May, 1900, it was decided (as a result of laboratory and clinical experience extending 'over fifty selected cases') to advocate the following; to wit: (1) that 'refined purified petroleum should be more extensively employed as a therapeutic agent,' and (2) that 'the reasons for its use should be more widely communicated to the profession at large.'"

The society has never in any manner endorsed a remedy. There may have been individual opinions expressed, but these could be regarded only as coming from the individual and not from the society, as the above quotation would indicate. In this particular instance, however, the quotation is at direct variance with the papers and records of the society, as will be shown by the paper read at the 1900 meeting by Dr. Reyburn on the "Inertness of Petroleum Compounds When Given Medicinally."

N. P. RAGNES,
Secretary American Therapeutic Society.

Queries and Minor Notes.

ANONYMOUS COMMUNICATIONS will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish his name will be faithfully observed.

TIME TO TAKE ALKALINE TO MAKE URINE ACID.

WASHINGTON, D. C., July 25, 1904.

To the Editor:—I most respectfully state, for the benefit of J. W. E., of Virginia, page 275, of THE JOURNAL, July 23, that alkaline salts given before meals enter immediately into the circulation of the blood, decomposing the neutral phosphates of soda therein, forming acid phosphate of soda, which, being eliminated by the kidneys, increases the acidity of the urine. On the other hand, when alkalies are given after meals, during digestion, the acid reaction of the gastric juice decomposes the salt forming CO_2 (presuming the alkali is one of the carbonates), the free salt entering the blood increases the alkalinity of that fluid. See Bartholow's Therapeutics.

J. T. HOWARD, M.D.

THE OLDEST STUDENTS' MEDICAL CLUB.

LOWELL, MASS., July 23, 1904.

To the Editor:—In reply to the inquiry of Dr. Cordell, in THE JOURNAL of this date, relative to the oldest students' medical club, I would offer the following: Dr. John Warren formed a students' club for the study of anatomy while he was a student at Harvard College, 1767-1771. This was before the founding of the Harvard Medical School. The club seems to have continued during the Revolution at least, for we find references to it in the letters of one of the members, William Eustis, written during that period. The Boylston Medical Society of Harvard University was formed in January, 1811, "for the purpose of promoting emulation and inquiry, and of disseminating medical knowledge among its members." It is composed of men who, at the time of their becoming members, are students at the Medical School of Harvard University. The first president of the society was Dr. John C. Warren. The Society has been in continuous existence since its birth to the present time.

THOMAS F. HARRINGTON, M.D.

Marriages.

EARLE C. GLENN, M.D., to Miss Ella G. Enser, at Baltimore, June 30.

H. EDWARD SAUER, M.D., to Miss Nellie Delia Bogle, both of Chicago, July 27.

JAMES H. BARTLEY, M.D. to Miss E. Grace Laughlin, both of Elliah, Wash., June 11.

WILLIAM L. SEABURY, M.D., to Miss Mattie May Tubman, at Glasgow, Md., July 11.

CARROLL B. BACON, M.D., to Miss Jennie F. Yelle, both of Waterloo, N. Y., June 29.

G. W. RUSSELL, M.D. Elysian, Minn., to Miss Gertrude Fuller of St. Paul, Minn., June 21.

HENRY J. HINKEL, M.D., Baltimore, to Miss Katherine L. Prevost, at Rockville, Md., March 2.

CAPT. IRVING W. RAND, M.D., U. S. Army, to Mrs. Kathryn Brown, at San Francisco, Cal., June 15.

CLARENCE WHITTINGHAM HOPKINS, M.D., to Miss Mary Emma Kinzie, both of Chicago, July 27.

WILLIAM W. QUINLAN, M.D., to Mrs. Truman W. Miller, both of Chicago, at Haverhill, Mass., July 12.

JOHN ARTHUR LUETSCHER, M.D., to Miss Charlotte Elizabeth Zumbleson, both of Baltimore, July 16.

P. N. KURZWEIL, M.D., Brooklyn, N. Y., to Miss Minnie Lustgarten of New York City, June 28.

ANDERS RINAR JOHNSON, M.D., Madison, Minn., to Miss Dina Rindal of Muskegon, Mich., June 17.

THOMAS ASH CLAYTON, M.D., Washington, D. C., to Miss Helen Niernsee of Columbia, S. C., June 30.

FRANCIS M. HARRINGTON, M.D., Pawtucket, R. I., to Miss Lena O'Keefe of Providence, R. I., June 20.

THOMAS H. DANIEL, M.D., Tennessee, to Miss Sarah B. Dunnington, at the University of Virginia, July 19.

WILLIAM ALDERSON BEARD, M.D., Redwood Falls, Minn., to Miss Irene Rose of Black Duck, Minn., June 29.

LORENZO SEYMOUR MORGAN, M.D., of Illinois, to RUTH BENNETT, M.D., of Los Angeles, Cal., Nashville, Tenn., June 28.

Deaths.

Henry E. Paine, M.D. Bellevue Hospital Medical College, New York City, 1863, for many years a member of the American Medical Association; a practitioner of Dixon, Ill., since 1865; formerly house surgeon in Bellevue Hospital, and assistant to Dr. Flint in his physiologic experiments; an acting assistant surgeon in the Army during the Civil War; district surgeon of the Chicago and Northwestern Railway, and local surgeon for the Illinois Central Railroad; a member of the National Association of Railway Surgeons; died at his home in Dixon, July 24, from pulmonary abscess, after an illness of two months, aged 63.

J. Fussell Martenet, M.D. University of Maryland School of Medicine, Baltimore, 1880, of Baltimore, a member of the American Medical Association; for several years in charge of the department of children in the Johns Hopkins Hospital Dispensary, and state vaccine agent, died at Johns Hopkins Hospital, July 18, from typhoid fever, aged 46.

Caroline H. Damon, M.D. Ohio, for many years a medical missionary in Southern China, died at the University Hospital, Ann Arbor, Mich., July 2, from tubercular meningitis, aged 60.

Herbert T. Greer, M.D. University of Maryland School of Medicine, Baltimore, 1892, died at his home in Rocky Mount, Va., July 7, after a lingering illness, aged 70.

William C. Cole, M.D. Louisville Medical College, 1872, a member of the Morgan County and Illinois State medical societies and the American Medical Association; assistant physician at the Illinois Central Hospital for the Insane, Jacksonville, died at his apartments in the institution, June 28, aged 59.

Richard T. Dozier, Jr., M.D. College of Physicians and Surgeons, Baltimore, 1899, a member of the American Medical Association, died at his home in Milledgeville, Ga., from disease of the stomach and liver, after a short illness.

Samuel L. Abbot, M.D. Harvard University Medical School, Boston, 1841, for 50 years on the staff of the Massachusetts General Hospital, died at his home in Boston, July 1, from apoplexy, aged 87.

William T. Blackford, M.D. New York University, New York City, 1851, of Graysville, Ga., while walking on a railroad track near Ringgold, Ga., was struck by a train and instantly killed, July 9, aged 78.

George Ford Geere, M.D. College of Medicine, Syracuse, (N. Y.) University, 1896, died at his home in Syracuse, June 27, from cardiac paralysis following diphtheria, aged 28.

William H. Githens, M.D. Medical Department of the University of Iowa, Keokuk, 1853; surgeon during the Civil War, died at his home in Hamilton, Ill., June 29, aged 77.

Alfred Sutton Hayden, M.D. Ohio, 1891, died suddenly at his home in Salem, Ohio, July 3, from Bright's disease, aged 38.

William S. Spriggs, M.D. Ohio, of Sarahsville, Ohio, died suddenly from apoplexy, June 30, while making a professional call, near Belle Valley, Ohio, aged 67.

Samuel M. Brown, M.D. Indiana, 1897, for 55 years a practitioner of New Bethel, Ind., died at his home in that place, June 25, after a long illness, aged 82.

Edmund T. Brown, M.D. Medical Department of Washington University, St. Louis, 1901, of Muldon, Miss., committed suicide by taking morphin, June 23.

Robert J. Flint, M.D. Illinois, 1894, died at his home in Antwerp, N. Y., from pulmonary tuberculosis, June 29, after a protracted illness, aged 33.

Wilford F. Hall, M.D. Chicago Medical College, 1874, of McLeansboro, Ill., died at a hospital in Chicago, June 18, after a lingering illness, aged 53.

Howard C. Hanson, M.D. Medical School of Maine at Bowdoin College, Brunswick, died, June 22, from acute mania at Portland, Maine.

Henry E. Harold, M.D. Indiana, 1899, of Lafayette, Ind., died in Indianapolis, June 30, from tuberculosis of the lungs, after a long illness.

Starkie S. Daniel, M.D. University of Maryland School of Medicine, Baltimore, 1887, died at his home in Winton, N. C., June 19.

James B. Bell, M.D., 1846, died at his home in Kansas City, Mo., July 13, from kidney disease, aged more than 80.

Kenan Hall, M.D. College of Physicians and Surgeons, Baltimore, 1881, died at his home in Macon, Ga., July 10.

William W. Curtis, M.D., died at his home in Hampton Falls, N. H., June 14, aged 99.

Addison H. Chaffee, M.D., 1872, died suddenly at his home in Breckenridge, Mo., July 4.

Nathan S. Brown, M.D., died at his home in State Line, Ind., July 7, aged 82.

Association News.

Transactions of the Sections.

Nine of the sections of the Association have ordered their proceedings bound in book form. The transactions of a section will include the papers read at the Atlantic City session, with illustrations and discussions, the minutes of the session, and a list of those registered or of those interested in that specialty. The volume measures about 6 by 9 inches, contains from 100 to 500 pages and is well bound in cloth, appropriately lettered. The following sections have ordered transactions: Practice of Medicine; Obstetrics and Diseases of Women; Surgery and Anatomy; Ophthalmology; Diseases of Children; Cutaneous Medicine and Surgery; Laryngology and Otology; Materia Medica, Pharmacy and Therapeutics; Pathology and Physiology. On publication, some of these books sell for $1.25 and some for $1.50. Every year there are many requests for copies after the supply has been exhausted. The number printed is very slightly greater than the number paid for in advance. This announcement is made now that those who wish copies and who have not ordered may do so. The price, if paid in advance, is $1 per copy for each of the above named sections. This is the price paid at the annual sessions, at which time the great majority of all subscriptions are received. This price is less than cost and therefore no orders are desired that are unaccompanied by the money. (If personal check is sent, 10 cents additional should be added to pay cost of exchange.) This announcement will not appear again. The printing of some of these books has commenced.

The Public Service.

Army Changes.

Memorandum of changes of stations and duties of medical officers, U. S. Army, week ending July 23, 1904:

Geer, Charles C., asst.-surgeon, reports from sick leave of absence to sick in U. S. Army General Hospital, Washington Barracks, D. C.

Billingsley, C. C., and Eastman, Wm. R., asst.-surgeons, arrived at San Francisco on the *Thomas* from Manila, P. I.

Palmer, Fred W., asst.-surgeon, reports departure from Jefferson Barracks, Mo., en route to San Francisco with recruits.

Bevans, James L., asst.-surgeon, relieved from duty at Fort Barrancas, Fla., and ordered to Fort H. G. Wright, N. Y., for duty.

Ford, Clyde B., asst.-surgeon, relieved from duty at Fort H. G. Wright, N. Y., and ordered to Fort Barrancas, Fla., for duty.

Owen, L. J., asst.-surgeon, reported for temporary duty at Fort Hancock, N. J.

Ford, Clyde B., asst.-surgeon, promoted captain and asst.-surgeon, U. S. Army, to rank from June 16, 1904.

Brown, Henry L., asst.-surgeon, assigned to duty at Columbus Barracks, Ohio.

Baily, Howard H., asst.-surgeon, assigned to duty at Plattsburg Barracks, N. Y.

Humphreys, Harry G., asst.-surgeon, assigned to duty at Fort Totten, N. Y.

Freeman, Paul F., asst.-surgeon, assigned to duty at Fort Slocum, N. Y.

Howell, Park, asst.-surgeon, left Fort McPherson, Ga., en route to target range, Waco, Ga., for duty.

Gilchrist, H. L., and Reynolds, Chas. R., asst.-surgeons, report arrival at Gettysburg, Pa., on detached duty with company of instruction, N. G. C.

Rhoads, Thos. J., asst.-surgeon, reports for duty as attending surgeon and examiner of recruits, Philadelphia.

Stimson, Geo. A., asst.-surgeon, left Fort Harrison, Mont., en route to Yellowstone Park with battalion Twenty-fourth Infantry, on practice march.

Minor, James C., contract surgeon, left Army and Navy General Hospital, Hot Springs, Ark., June 27 on leave of absence.

Conner, Michael J., contract surgeon, granted leave of absence for one month from Fort Miley, Cal.

Whitney, Walter, Brown, Pelt D., McConathy, Herbert M., Warriner, Benjamin R., Porter, Miss E., Johnson, Charles W., Shayter, John T. H., Sherin, Harry A., and Ward, Josiah M., contract surgeons, arrived July 14 at San Francisco on the transport *Thomas* from the Philippine Division. The first seven mentioned have leaves of absence.

Stallman, George R., contract dental surgeon, now at San Francisco, will sail August 1 for the Philippine Division.

Lauderdale, Harvey E., contract dental surgeon, granted leave of absence for two months from the Philippine Division, with permission to visit Japan.

Navy Changes.

Changes in the medical corps, U. S. Navy, for the week ending July 23, 1904:

DeValin, C. M., P. A. surgeon, detached from the *Albany* and ordered home to wait orders.

McDonnell, H. A., A. surgeon, detached from the *Glacier* and ordered to the *Marcellus*.

McMurdo, F. F., A. A. surgeon, detached from the *Gloucester* and ordered to the Navy Yard, League Island, Pa.

Black, W. H., surgeon, detached from the Navy Yard, N. Y., August 12 and ordered to the Naval Station, New Orleans.

Bogert, E. S., Jr., surgeon, orders of July 15 modified, ordered to continue duty at the Naval Academy.

Curtis, L. W., surgeon, detached from the *Buffalo*, and ordered home to wait orders.

Parker, E. G., P. A. surgeon, detached from the *Wheeling* and ordered to the *Buffalo*.

Sutton, R. L., asst.-surgeon, detached from duty with the Marine Battalion on the Isthmus of Panama and ordered to the Naval Hospital, New York, N. Y., for treatment.

Grieve, C. O., asst.-surgeon, detached from the Naval Station, Cavite, P. I., and ordered to the Naval Station, Guam, L. I.

Cather, D. C., asst.-surgeon, appointed asst.-surgeon, with rank of lieutenant, junior grade, from July 2, 1904.

Marine-Hospital Service.

Official list of the changes of station and duties of commissioned and non-commissioned officers of the Public Health and Marine-Hospital Service for the seven days ended July 14, 1904:

Stoner, J. R., surgeon, to proceed to Ocean City, Md., Chincoteague and Wachapreague, Va., for the physical examination of certain keepers and surfmen of the Life Saving Service.

Guiteras, G. M., surgeon, granted leave of absence for seven days from July 14.

Grubbs, S. B., passed asst.-surgeon, to proceed to Moss Point, Miss., for special temporary duty.

Billings, W. C., passed asst.-surgeon, department letter of March 28, 1904, granting Passed Asst.-Surgeon Billings leave of absence for two months and three days, amended to read one month and twenty-eight days.

Korn, W. A., asst.-surgeon, relieved from duty at Philadelphia, Pa., and directed to proceed to Perth Amboy, N. J., for duty.

Ameson, J., surgeon, department letter of March 28, 1904, granting Asst.-Surgeon Amesse leave of absence for two months and fifteen days, amended to read two months and eleven days from May 1.

Glover, M. W., asst.-surgeon, granted leave of absence, on account of sickness, for seven days.

Bahrenburg, L. P. H., asst.-surgeon, relieved from duty at Chicago and temporary duty at Evansville, Ind., and directed to proceed to Delaware Breakwater Quarantine and report to the medical officer in command for duty and assignment to quarters.

Stimson, A. M., asst.-surgeon, on being relieved at New Orleans, La., by Asst. Surgeon E. M. Stoner, to proceed to Washington, D. C., and report to the director of the Hygienic Laboratory for duty.

Ward, W. K., asst.-surgeon, on being relieved at New Island Quarantine by Asst.-Surgeon G. L. Collins, to proceed to Washington, D. C., and report at the Bureau for instructions preliminary to assignment to duty in the office of the United States Consul at Bridgetown, Barbadoes, British West Indies.

Roberts, Norman, asst.-surgeon, relieved at New Orleans, La., and directed to proceed to Evansville, Ind., and assume temporary charge, relieving Asst. Surgeon L. P. H. Bahrenburg.

Collins, G. L., asst.-surgeon, relieved from duty at Hilts Island, N. Y., and directed to proceed to Reedy Island Quarantine and report to the medical officer in command for duty and assignment to quarters, relieving Asst.-Surgeon W. K. Ward.

Stone, R. M., asst.-surgeon, relieved from duty at Hills Island, N. Y., and directed to proceed to New Orleans and report to medical officer in command for duty in connection with the examination of aliens, relieving Asst.-Surgeon A. H. Glennan.

Brown, R. J., Jr., acting asst.-surgeon, granted leave of absence for twenty-one days from July 8.

Cleaves, H., acting asst.-surgeon, granted leave of absence for twenty-three days from July 8.

Goldsborough, R. W., acting asst.-surgeon, granted leave of absence for three days from July 12.

Gregory, G. A., acting asst.-surgeon, granted leave of absence for seven days from July 5.

Keatley, H. W., acting asst.-surgeon, granted leave of absence for two days from July 1, 1904, under paragraph 210 of the regulations.

Savage, W. L., acting asst.-surgeon, granted leave of absence for thirty days from August 1.

Stevenson, J. W., acting asst.-surgeon, granted leave of absence for ten days from July 16.

Thomas, W. L., acting asst.-surgeon, granted leave of absence for thirty days from July 10.

Weldon, W. A., acting assistant surgeon, granted leave of absence for thirty days from July 8.

Allen, G. L., pharmacist, granted leave of absence for thirty days from July 12.

BOARDS CONVENED.

Board convened at Washington, D. C., July 11, 1904, for the physical examination of an officer of the Revenue-Cutter Service. Detail for the board: Asst.-Surgeon General G. T. Vaughan, chairman; Asst.-Surgeon A. J. McLaughlin, recorder.

Board convened at the Marine Hospital, Baltimore, July 12, 1904, for the physical examination of an officer for the Revenue-Cutter Service. Detail for the board: Asst.-Surgeon C. W. Wilds, chairman; Acting Asst.-Surgeon J. G. Evans, recorder.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon General, Public Health and Marine-Hospital Service, during the week ended July 23, 1904:

SMALLPOX—UNITED STATES.

Colorado: Denver, May 29-July 9, 8 cases.
District of Columbia: Washington, July 9-16, 1 case.
Florida: Jacksonville, July 9-16, 1 case.
Georgia: Macon, July 3-9, 2 cases.
Illinois: Chicago, July 9-16, 10 cases; Springfield, July 11-18, 3 cases.
Iowa: Clinton, July 2-9, 1 case imported from St. Louis.
Louisiana: New Orleans, July 9-16, 3 cases traceable to importation.
Michigan: Detroit, July 9-16, 1 case; at 71 localities, July 2-9, present.
Missouri: St. Louis, July 9-16, 2 cases.
New Hampshire: Manchester, July 9-16, 3 cases.
New York: July 9-16, Buffalo, 1 case; Niagara Falls, 1 case.
Pennsylvania: July 9-16, Philadelphia, 1 case; Steelton, 1 case.
Tennessee: Memphis, July 9-16, 1 case.
Wisconsin: Milwaukee, July 9-16, 2 cases.

SMALLPOX—FOREIGN.

Austria: Prague, June 18-July 2, 7 cases.
China: Shanghai, June 11-18, 6 deaths.
Great Britain: July 2-9, Birmingham, 1 case; Liverpool, 1 case; June 18-July 2, Bradford 7 cases; Nottingham, 29 cases; June 25-July 2, Blackburn, 2 cases; London 10 cases, 1 death; Manchester, 1 case; Newcastle-on-Tyne, 6 cases, 2 deaths; Glasgow, 10 cases, 2 deaths.
India: Bombay, June 14-21, 18 deaths; Calcutta, June 11-18, 2 deaths.
Italy: Palermo, June 18-July 2, 2 cases, 1 death.
Japan: Kobe, June 11-25, 2 cases.
Mexico: City of Mexico, June 26-July 10, 5 cases, 0 deaths.
Russia: Moscow, June 19-25, 10 cases, 7 deaths; St. Petersburg, June 25-July 2, 12 cases, 4 deaths.
Turkey: Alexandretta, June 18-25, 1 death; Beirut, June 18-July 2, present.

YELLOW FEVER.

Colombia: Barranquilla, June 25-28, 1 death.
Costa Rica: Limon, July 2-9, 1 case.
Ecuador: Guayaquil, June 5-9, 21 deaths.
Mexico: July 2-9, Contzacoalcos, 1 case; Vera Cruz, 2 cases, 1 death.

CHOLERA.

China: Shanghai, June 11-18, reported.
India: Calcutta, June 11-18, 9 deaths; Madras, June 11-17, 1 death.
Persia: Kesm, June 15, present.
Turkey in Asia: June 13, 642 cases, 220 deaths.

PLAGUE.

Africa: Cape Colony, June 4-11, 1 case; Transvaal, to June 26, 146 cases, 96 deaths.
Australia: Brisbane, May 23-June 1, 4 cases; Sydney, May 27, 1 case.
Chile: Antofagasta, May 24-31, 12 deaths.
China: Amoy, June 4, present.
Egypt: June 11-18, 20 cases, 10 deaths, including 5 cases and 1 death in Alexandria and 1 case in Port Said.
India: Bombay, June 14-21, 35 deaths; Calcutta, June 11-18,

Medical Organization.

Iowa.

IOWA STATE MEDICAL SOCIETY.—This society held its fifty-third annual meeting at Des Moines, May 19, 20 and 21. This was the first meeting since the reorganization. The work of reorganization has been carried on effectively, and when the house of delegates met, May 19, 80 of the 99 counties had completed their organization and had elected representatives. The new constitution adopted at Sioux City in April, 1903, was not satisfactory to a few counties in the state, and efforts were made to overthrow the constitution and begin again. Dr. John S. Lewis, Dubuque, introduced a memoir, asking that a review of the work done at Sioux City be made, and attacking the constitutionality of the adoption, etc. This, through the indulgence of the president, Dr. Joseph A. Scroggs of Keokuk, was referred to a special committee of five, who reported at the second afternoon session, upholding the action of the convention in 1903, and recommending the constitution. The debate on this report was limited to one hour, Dr. Lewis consuming most of the time for his side, and making a very scholarly and telling speech. Dr. David S. Fairchild, Des Moines, answered Dr. Lewis. The vote was overwhelmingly in favor of the report. The election of officers resulted as follows: Dr. David C. Brockman, Ottumwa, president; Drs. J. Fred Clarke, Fairfield, and Dr. Jennie McCowan, Davenport, vice-presidents; Dr. Vernon L. Treynor, Council Bluffs, secretary; Dr. William B. Small, Waterloo, treasurer, and Dr. Edward E. Dorr, Des Moines, delegate to the American Medical Association.

Michigan.

MUSKEGON COUNTY MEDICAL SOCIETY.—On a call issued by Dr. William T. Dodge, Big Rapids, councilor for the Eleventh District, twelve physicians of the county met at Muskegon, June 23, and organized a county society on the standard plan.

Missouri.

STODDARD COUNTY MEDICAL SOCIETY.—Dr. James J. Norwine, Poplar Bluff, met the physicians of Stoddard County at Bloomfield, June 22, and organized a county medical society with an initial membership of 20, and the following officers: President, Dr. Thomas B. Hurabaugh, Bloomfield; vice-president, Dr. Tazwell B. Wingo, Dexter; secretary, Dr. D. R. Corbin, Bloomfield, and treasurer, Dr. Sammuel M. Evans, Bloomfield.

MISSOURI STATE MEDICAL ASSOCIATION.—A pro forma decree of incorporation was applied for by this association July 2. The object of the organization was given as the advancement of medical science and the medical profession. The petition was signed by the officers and members of the association.

Oklahoma.

COMANCHE COUNTY MEDICAL SOCIETY.—Physicians of the county met with Dr. Mahlon A. Kelso, Enid, councilor for the Third District, at Lawton, July 6, and organized a county society on the standard plan, with the following officers: Dr. Ferdinand Shoemaker, Lawton, president; Dr. Adam B. Fair, Lawton, vice-president; Dr. Richard H. Tullis, Lawton, treasurer, and Dr. J. Angus Gillis, Frederick, secretary.

KAY COUNTY MEDICAL SOCIETY.—On June 21 Dr. Mahlon A. Kelso, Enid, councilor for the Third District, organized this society on the standard plan at Newkirk, with a membership of fourteen, and the following officers: Dr. Mark M. Lively, Blackwell, president; Dr. James S. Scott, Ponca City, vice-president; Dr. Abraham L. Haase, Newkirk, secretary; Dr. W. A. T. Robertson, Ponca City, treasurer; Drs. Edgar J. Orvis, Antwine, one year, Otis H. Morey, Ponca City, two years, and Virgil A. Wood, Blackwell, three years; and delegate to the territorial society, Dr. Otis T. Morey, Ponca City.

Tennessee.

SMITH COUNTY MEDICAL SOCIETY.—Physicians of the county met at Carthage, June 24, and organized a medical society on the standard plan.

Book Notices.

EPILEPSY AND ITS TREATMENT. By William P. Spratling, M.D., Superintendent of the Craig Colony for Epileptics at Sonyea, N. Y. Illustrated. Cloth. Pp. 322. Price, $4.00 net. Philadelphia, New York, London: W. B. Saunders & Co. 1904.

This book is by far the largest and most ambitious work on epilepsy published in this country since 1870, when the classical treatise of Echeverria appeared. The author has had most exceptional opportunities for the observation and study of the disease, having been medical superintendent of the New York Colony for Epileptics for a period of nearly ten years. This is one of the largest colonies in the world and we believe it is

the best of them. These parts of the book based on the author's personal experience and investigations are beyond criticism. The chapter on the general treatment of epilepsy is one of the best we have read: concise, practical and most timely. The chapter on the medical treatment is not so strong because it contains less of the author's individual opinion and makes more of an attempt to cover the many methods advocated by others. The discussion on the surgical treatment of the disease is very well balanced and on the whole a safe guide, but we believe that a description of surgical technic is entirely out of place in a work of this kind. The directions given for opening the cranial cavity and for performing abdominal section would be ridiculously inadequate if the operator had had no surgical training and they are entirely superfluous for a trained surgeon. The chapters on status epilepticus contributed by L. Pierce Clark and that on the pathology of epilepsy by Drs. Frost and Clark are masterly, covering the ground fully and in a manner quite beyond criticism. In our opinion two defects mar the work and detract from its value. First, the author apparently lacks a good, broad, neurologic training. This want has allowed considerable loose and incorrect statement to creep into the text. Second, the arrangement and manner of presentation of the matter might be much more effective. These are not irremedial faults and may be corrected in the second edition, which is sure to be called for.

As a whole the book covers the subject very completely and contains some matter which is peculiarly good, and some which is difficult to find elsewhere. For example, the chapter on the sequelæ of epileptic convulsions is a valuable contribution to the subject, the part on exhaustion-paralysis being a real contribution to the literature. The description of the unusual and psychic forms of epilepsy will be of great value to the general practitioner, and the chapters on the psychologic and medico-legal aspects of epilepsy contains much of value, and which is scarcely accessible to him who has not accumulated a considerable library on epilepsy and allied subjects. The one chapter which appears to us to be altogether lacking in fullness is that on diagnosis. Three pages serve to cover the diagnosis of epilepsy from hysteria, a differential diagnosis which involves many of the fine clinical features of both diseases. It is to be hoped that in future editions this subject will be more thoroughly presented.

LECTURES ON CLINICAL PSYCHIATRY. By Dr. Emil Kraepelin, Professor of Psychiatry in the University of Dorpat. Authorized Translation from the German, Revised and Edited by Thomas Johnstone, M.D. Edin., M.R.C.P. Lond., Member of the Medico-Psychological Association of Great Britain and Ireland. Cloth. Pp. 300. Price, $3.00 net. New York: Wm. Wood & Co. 1904.

The English reading members of the profession are certainly under great obligations to the editor and publishers and unknown translator of this work. It has been a standard in Germany ever since its appearance. The author may be said to stand at the head of the alienists of Germany, and he is second to none in the world. Its clearness of expression and pleasing manner of presentation of the subjects considered the work is certainly remarkable, and is destined to become a classic. While it does not explore all the by-ways of mental disease, there is no feature of clinical psychiatry omitted which would be of importance to the general practitioner. It is to be hoped that this translation will have a wide circulation, and that it will be very generally read not only by those particularly interested in mental disease, but by a great many general practitioners. Indeed, we are sure that numberless asylum physicians might study it with great edification, and with considerable benefit to their patients. Where all is good it is difficult to discriminate, but we believe that the chapters on melancholia, maniacal depressive insanity, dementia præcox, irresistible ideas and irresistible fears and the one on morbid personalities are particularly practical and valuable.

A TEXT-BOOK OF OPERATIVE SURGERY, Covering the Surgical Anatomy and Operative Technic Involved in the Operations of General Surgery. Written for Students and Practitioners. By Warren Stone Bickham, Phar.M., M.D., Assistant Instructor in Operative Surgery, College of Physicians and Surgeons, New York. Second Revised Edition, with 350 Illustrations. Cloth. Pp. 564. Price, $3.00 net. Philadelphia, New York and London: W. B. Saunders & Co. 1904.

The first edition of this work, which appeared but six months ago, was reviewed in these columns. There have been no additions nor material changes in this, the second edition, but some of the slight clerical errors to which attention was directed in the former review have been corrected. That the first edition was exhausted within six months must be a source of gratification to the author, as well as an indication of the manner in which the work has been received by the profession.

Society Proceedings.

COMING MEETINGS.

AMERICAN MEDICAL ASSOCIATION, Portland, Ore., July 11-14, 1905.

Academy of Ophthalmology and Otolaryngology, Denver, August 21-26.

Medical Society of the Missouri Valley, Council Bluffs, Iowa, August 24.

Oregon State Medical Association, Portland, August 29-31.

Wyoming State Medical Society, Sheridan, September 13.

American Association of Obstetricians and Gynecologists, St. Louis, September 12-15.

American Electro-Therapeutic Assn., St. Louis, September 13-15.

Medical Society of the State of Pennsylvania, Pittsburg, September 27-29.

ASSOCIATION OF AMERICAN MEDICAL COLLEGES.

Minutes of the Fourteenth Annual Meeting, held at Atlantic City, N. J., June 6, 1904.

MORNING SESSION.

The Association convened in the Hotel Islesworth, and was called to order at 10:45 a. m. by the president, Dr. J. R. Guthrie, Dubuque, Iowa.

On motion, the roll call of members was postponed until the afternoon session, and the first portion of the program was proceeded with, as announced.

Dr. J. A. Bodine was called to the chair, while the president, Dr. Guthrie, delivered the presidential address.

President's Address.

Gentlemen of the Association:—I desire to thank you most heartily for the honor you have conferred on the college which I represent in selecting me to preside over the deliberations of this meeting, and to earnestly solicit your cordial co-operation to the end that the objects of this Association may be splendidly subserved.

Born of courage and conviction, this Association has a record of which to be justly proud. The past is secure, the present ours and the future largely in our hands. Yes, with us, and our fidelity and loyalty to the fundamental objects of this Association, rests the advancement of medical education in this country. The association was born in 1890, and the part it has taken in the United States is highly commendable.

From this congratulatory retrospect, let us be stimulated and encouraged to win still more substantial victories in the cause of medical education in the near future. Let us not tickle ourselves overmuch over these successes, but confront rather the plain facts.

A brief comparison of our standards with those of other countries will convince us that they are yet far too low, and for the accomplishment of the greatest good must be advanced. Our standards are lower than those in Great Britain, and on the continent, and the contest must go on until all this is changed.

Commercialism stifles the professional spirit and is one of the greatest evils of our time.

One of the most powerful causes of this defect is the overcrowding of the profession. The percentage of physicians in this country is higher than many other places on the globe, one to every 500 persons; twice as many as in Great Britain. The number of students graduated this year will be twice that needed to keep up this congestion. Where is the remedy? What is the antidote? In what way may the colleges lessen this evil? Manifestly we need not more students, but a better grade and quality.

We are to be congratulated on the forward step taken at the last meeting, in elevating the standard of admission into the colleges of this association. That was truly commendable, and further progress is in sight.

But far more important and praiseworthy is the firm, consistent adherence to the entrance requirements already fixed. The present needs are not so much for higher standards of admission, as for firmer, more consistent enforcement of the rules.

The entrance examinations should be conducted by some one not connected with the teaching force of our schools and entirely free from any bias.

The association took a most commendable stand on this point at its New Orleans meeting. Our requirements are now too low and must be increased gradually; perhaps not for some time to demand a baccalaureate degree as an entrance qualification, for that hardly seems practical in a country so broad and diversified as ours. Yet the time is not far distant when in addition to a four years' high school course, two years training in scientific study will be demanded. This training would fit students for leaders, not camp followers, in the onward march of scientific, rational medicine.

The evolution of the combined course is along parallel lines and is, perhaps, growing in the minds of the best educators.

Without attempting a discussion of the arrangement of the course in any detail, it should be insisted on that four full years is spent in purely medical study. Four years is none too long to appal in the purely technical study of the science of medicine. Any shading of the combined course should be in academic rather than medical studies. Why is a demand made for a shorter course? Does such a demand grow out of present economic conditions? Certainly not, with one physician to each five hundred persons in this country. Does the cause of education or do the best interests of humanity demand this change? Certainly not! Commercialism alone demands a contraction of the course of study.

Uniformity in many things is quite impossible, but this is not so in reference to the college year. It should be made nine full months, and to apply to every medical school throughout the country.

The answer is made that a seven months term gives time for the student to earn money for the next year, while nine months offers no such advantage. Here the objection is purely mercenary and not at all from the best interest of education nor humanity.

Again, a better standard of final examinations should be established and fully lived up to by every college in this association. The present method of final examination is notoriously deficient. Any student can, after a four-year course, with the aid of quiz compends, pass this test, and yet be may be unfit for the duties and responsibilities of the profession. He passes a purely didactic examination. Insisting, as we do, on laboratory methods of instruction, we should also demand an examination in laboratory work. This would test the student's actual knowledge and his ability to apply that knowledge in solving problems.

Inseparably connected with the foregoing, is the question of advanced credit, and like it, born of commercialism, a desire to obtain a shorter route into the medical profession. With this percentage it must certainly be viewed with suspicion.

In what interest is the demand for advanced credit made? Is it in the interest of a better quality of medical training? We fear it is not. Is it in the interest of the healing art, or our common humanity? Emphatically, no!

Baccalaureate degrees are frequently of such uncertain value, and many times of no value, that the question is both difficult and important. All are, I think, agreed to this proposition that for a student to receive advanced standing for a baccalaureate degree, this degree must have been edrned along scientific laboratory courses. The scientific education of today should be secured in a college with large endowment so that the various laboratories may be provided with the best modern equipment and enough competent instructors so that the section method in laboratory teaching may be properly carried out.

Dr. W. W. Keen, four years ago, at the meeting of the American Medical Association in this city, argued in favor of a large endowment for the medical college, an end which, if once attained, will solve this entire question. No advanced standing should be allowed for any degree unless for those who pursued the scientific course with a view to acquiring a medical education.

I am convinced that the granting of credit for any degrees whatsoever should be abolished in the interest of humanity, our profession and the cause of higher education.

That there is great need of active systematic work in the improvement of our standards, no one for a moment doubts.

There are over fifty regular medical schools in the United States outside of this Association. An organized effort should be made to bring in the best of these, not to strengthen the association, but by co-operation elevate the general status of the profession.

Work can be accomplished by co-operation on the part of this association with the "National Association of Licensing Boards." A uniform statutory requirement is at present impractical owing to the variable condition of population and education. Yet it must be conceded that state licensing boards will insist on such qualifications as the majority of recognized medical colleges demand.

Early in the past year an intimation was heard that the American Medical Association might and would make some requirement for admission of its members which would elevate or help to elevate the educational standard in America. This statement was definitely made, through THE JOURNAL of the American Medical Association, the mouth-piece of this association, and it was heard again in the majority report on entrance examinations at our meeting at New Orleans. If this idea was ever seriously considered, the actual workings of the reorganization scheme of the Association, doing away with all requirements and practically admitting every one regardless of qualifications must effectually disabuse us of any such notion. The reorganization accomplished the desired result of the association's growth numerically, but not its growth or improvement in educational attainment.

President Redman, in his address, recommended a committee for inspection of all schools, members of this association and those applying for membership. The secretary, in his report, made the same suggestion, asking for an appropriation of $400 for defraying such expenses. The minutes of the last session show this suggestion was referred to the committee on by-laws. But no record of any action is found in the minutes of any meeting.

I believe the suggestion is worthy of consideration, and hope the association will take affirmative action at once.

In conclusion, I believe the time has come when this Association should decide in favor of:

1. Uniformity of length of term, and make the minimum nine months.

2. That we should seek to establish practical uniformity of curricula.

3. That this association should require a definite number of hours as a minimum in any one subject.

4. That our methods of final examination should be so changed as to include a test of a student's knowledge of laboratory methods and of his ability to apply his knowledge in solving problems at the bedside.

5. That the standard of requirements of admission should be raised as rapidly as practical to junior standing.

Our medical schools must be liberally endowed, thus liberating faculties from the need of student tuition, and forever relieving medical education of the baneful influence of commercialism.

Our colleges of medicine must no longer be places for imparting a certain amount of knowledge, but outposts on the field of discovery in rational medicine, devoted to original research work.

The Association is to be congratulated on the advancement made in the past, urged to look seriously at the present, and hopefully to the future.

On motion of Dr. Wm. H. Wathen, a committee of three was appointed to consider the suggestions contained in this address, and to report at the afternoon session. The chair appointed on this committee Drs. Wm. H. Wathen, Seneca Egbert and S. C. James.

Dr. Wm. H. Wathen of Louisville, Ky., followed with a paper entitled "The True Purpose of Education."

On motion the discussion on this paper was deferred until after the reading of the papers by Drs. Taylor and Kober, the three to be discussed together, inasmuch as they dealt with related subjects.

Prof. Henry L. Taylor of Albany, N. Y., read a paper on "What Credit, If Any, Should Be Given by Medical Colleges to Holders of Baccalaureate Degrees?"

Dr. Geo. M. Kober of Washington, D. C., contributed a paper entitled "A Plea for Uniform Curricula in Medical Colleges."

Committee on National Uniformity of Curricula.

Dr. Kober, in his paper, offered the following resolution:

Resolved, That a Committee on National Uniformity of Curricula be appointed, to co-operate with a similar committee appointed by the National Confederation of State Examining and Licensing Boards, for the purpose of promoting a minimum standard of

Medical Education, together with such recommendations on the committee may deem proper as to the duration of the course, a four years' graded course. Said report to be presented at the next annual meeting, and to be printed and distributed at least one month before said meeting.

On motion, duly seconded, the resolution was adopted unanimously. The chair appointed as this committee, Geo. M. Kober, 1660 T. Street, Washington, D. C., Wm. J. Means and Parke Ritchie.

The discussion on the papers of Wathen, Taylor and Kober was participated in by Drs. Seneca Egbert, Clara Marshall, D. A. K. Steele, Wm. H. Wathen, Henry L. Taylor and Geo. M. Kober.

Dr. Seneca Egbert of Philadelphia, contributed a paper entitled "Teaching Methods."

Dr. Geo. M. Kober offered the following resolution:

Resolved, That the Association of American Medical Colleges approves of the so-called combined system of literary and medical education, and of giving three credits (not exceeding one year) to the holder of the degree of B. S., or B.A., or other equivalent, from a reputable college or university; *Provided*, that such students has had at least 900 hours in physics, chemistry, osteology, histology, embryology, anatomy and physiology; and *Provided*, that this department for such time credits outside the professors of the chairs mentioned in the medical school as to his proficiency in these first-year medical studies.

The resolution was duly seconded and adopted.

On motion, the association adjourned until 2 p. m.

(*To be continued.*)

NORTH BRANCH PHILADELPHIA COUNTY MEDICAL SOCIETY.

Regular Meeting, held June 23, 1904.

Dr. Samuel Wolfe in the Chair.

Cases Reported.

Dr. Anna M. Reynolds exhibited a specimen of bone passed per rectum by a woman who, six years before, had fallen downstairs and struck her left side, it being six months thereafter before she felt all right: on physical examination, the lower rib on that side could not be found and the specimen looked very much like a rib.

Interesting cases were also reported by Dr. Harry Lowenburg and Dr. Alfred Hand, Jr.

This was followed by a symposium on summer diarrhea of children.

Etiology of Summer Diarrhea of Children.

Dr. ALFRED HAND, JR., stated that the disease was undoubtedly of infectious origin and that of the causative factors three stood out with striking weight: (1) summer time, (2) infancy, and (3) bottle feeding, the first being mainly dependant on the delicate anatomic structure and immature physiologic functions. He stated that out of 626 cases of diarrhea in children from 1898 to 1902, in his dispensary service at the Children's Hospital, 12 per cent. occurred in May, 20 per cent. in June, and 52 per cent. in July. The heat exerts its influence by favoring the resisting power of the individual and favoring the multiplication of bacteria in milk and water, which is particularly emphasized in large cities, due to the heat, stale atmosphere, filled with dust and germs, and the age of the milk supply. He laid especial emphasis on the importance of cleanliness in the production and handling of the milk. He referred to the work of Shiga and Duval with the dysentery bacillus; the latter having demonstrated that out of 42 cases of summer diarrhea in infants, every one gave positive results as to the dysentery bacillus; and out of 20 cases in his wards at the Children's Hospital last summer, 12 gave positive results. He remarked that the bacillus had been isolated from water, and referred to the views of Kraus and Nowakowsa as to the relationship between the drainage of the community and the number of cases of summer diarrhea.

Prevention of Summer Diarrhea.

SAMUEL MCC. HAMILL considered as factors entering into the production of these conditions: (1) the atmospheric conditions—excessive heat, humidity and sudden fall in temperature, which act in two ways, first by increasing the bacterial contents of the milk, and, second, by reducing the resisting power of the individual, the latter of which should be protected as much as possible by regulation of the clothing of the child, taking it to the country or keeping it in the shade, etc.; (2) defective conditions of hygiene, rendering the food liable to contamination and causing the child to suffer from lack of sufficient light and air, which should be remedied by keeping the child in the street or park, etc., as much as possible; (3) defective conditions of the soil, resulting from dusty and torn up streets; (4) lowered resistance from infectious or nutritional disturbances, which should be guarded against by careful regulation of diet, particularly as to digestibility, cleanliness and regular administration. He stated that mother's milk was the best food for the infant, and when cow's milk must be substituted, recommended that careful attention be paid to the sanitary and hygienic production thereof as the toxic products in unclean milk can only be destroyed by a degree of heat which renders its nutritional value less. He also recommended careful attention to the nursing bottle, which should be thoroughly cleansed after each feeding. Proper bathing should also be given careful attention, and water, always boiled, should be allowed freely, but not within one and one-half hours from the preceding meal.

Treatment of the Summer Diarrhea of Children.

DR. H. LOWENBURG considered this subject under the following heads: (1) prophylaxis, (2) dietetic treatment, (3) mechanical treatment, (4) medicinal treatment, (5) serum treatment. Under the head of prophylaxis he regarded as the most important factors summer heat and improper feeding. The sleeping apartments should be cool and well ventilated, and the bed covered with mosquito netting in order to prevent the contact of flies and influence of drafts. Cool bathing is also of value. The feeding of the infant should be at regular intervals, and, if possible, it should be breast fed; if not, pasteurized milk, if obtainable, or in the event this can not be secured, the milk as well as all water entering into its composition should be boiled, the exact composition of the food to be governed by the particular case. Careful attention should also be given to the cleansing of the nipple and nursing bottle. As to the dietetic treatment, all milk should be discontinued, on the beginning of an attack for twenty-four to forty-eight hours, sterile water being administered at short fixed periods, preferably, if tolerated, albumin water, to which may be added expressed beef juice or brandy; in severe cases the child must be maintained on nutrient enemata for twenty-four to forty-eight hours. The use of milk of slight strength, preferably peptonized, should be gradually resumed and the strength increased. The mechanical treatment consists of lavage in cases of uncontrollable vomiting; colonic irrigation when incomplete emptying of, or combined with silver nitrate solution, 1 to 1,000, when there is ulceration of the bowel; and hypodermoclysis in cases of cholera infantum during the stage of collapse following excessive purgation. The medical treatment consists of purgatives, such as castor oil and calomel, combined with intestinal irrigation in the fermental type of diarrhea; following this are administered the intestinal antiseptics consisting of salol, zinc sulphocarbolate and copper arsenite, which, however, have not been attended with success on account of the inability to administer them in large doses; and the intestinal astringents and sedatives such as morphia, bismuth and subnit. The serum treatment, he stated, was still in its experimental state and referred to the paper read by Holt at the recent meeting of the American Medical Association.

DISCUSSION.

DR. JAMES H. MCKIM stated that there were a number of instances in which the streptococci had been found in milk, and referred to the work of Eldridge, Vaughan, Robinsky, Holt and Parks in this direction. As to the finding of the dysentery bacillus, he believed that there was no doubt of its presence in these cases, but the frequency varied considerably according to different observers. He stated that while he did not believe pasteurization or sterilization could replace a pure milk, these measures were of immense value, and also remarked that he had seen a number of cases of milk infection produced by pure

milk. In the treatment of the cases, he recommended the withdrawal of all food and the administration of barley water for forty-eight hours, after which the resumption of milk should be gradual. In cases of fermentative diarrhœa he recommended the administration of calomel at first, with castor oil later on, and the withholding of milk; in severe cases enterolysis of normal salt solution was recommended. In these cases milk should not be resumed within forty-eight hours, but barley jelly may be administered on the third day, followed by animal broths.

Dr. LeBoutillier referred to the large amount of bacteria in the ordinary milk supply, and referred to the case of a patient who was taken with a slight attack of diarrhœa which he attributed to the milk, which, on examination, was shown to contain streptococci. In regard to pasteurization, he believed the home modification, if possible to be carried out, better than the laboratory method.

Dr. W. H. Ruoff referred to the danger of producing diarrhœa from bichlorid of mercury formed by the giving of calomel followed by enemata of normal salt solution, and believed codein to be preferable to morphin for a soothing effect.

Dr. William H. Goss thought that if the calomel had not changed when passing through the gastric contents it would not do so when it reached the sodium chlorid.

Dr. H. Bascom Mills said he had observed the almost universal use abroad of a bottle with a long rubber tube, and that there was no more trouble there than in this country, where we do away with the attachments.

Dr. McHaniell stated that sterilization should be used only as a temporary procedure, and that at the present time all ordinary milks were of such a character as to require pasteurization. He believed that if certified milk was used in winter we should be able to use it in summer without pasteurization. He remarked that the certified milk seemed to suffer more in March than in any other month, which he attributed to the fact of the sudden change of weather and insufficient icing to stand the same.

Dr. H. Lowenburg stated that while possibly pasteurization and sterilization might not be the best methods of destroying the organisms and modifying the toxins, he felt they were the best available for the poorer classes. He did not believe there was any danger as suggested in the administration of calomel followed by saline enemata.

CLEVELAND ACADEMY OF MEDICINE.

Regular Meeting, held April 15, 1904.

The Vice-president, Dr. W. E. Bruner, in the Chair.

After the regular business meeting, at which delegates were appointed to the American Medical Association, and new members were elected, Dr. Bruner introduced the guest of the evening, Dr. F. B. Mallory of Harvard Medical School.

Coccygeal Glioma.

Dr. Mallory's subjects were "A Glioma Over the Coccyx with Metastases," and "Demonstration of Bodies Found in the Skin in Cases of Scarlet Fever." In the first paper he described a tumor occurring over the coccyx, probably originating in fetal inclusions of the terminal end of the neural canal, the chief peculiarity being the fibers which were found in large numbers. The relations of these to the cells of the tumor were such that the diagnosis of glioma was made, though the recurrences and the metastases were carcinomatous in type. The fibrils were of three varieties, the typical neuroglia, lying about the essential cells of the tumor, the myoglia, or bundles of fibers lying about the smooth muscle cells, and the fibroglia of the ordinary fibrous tissue.

The Possible Parasite of Scarlet Fever.

In his second paper Dr. Mallory gave a brief outline of his work in connection with the possible parasite of scarlet fever, illustrated with drawings and with lantern slides from photomicrographs. The bodies seen very much resemble those seen in malaria, the roseate form being especially striking. He was extremely conservative in his statements, admitting the incompleteness of the evidence, but, on the other hand, giving strong reasons why the appearances were probably neither artifacts nor invasion of leucocytes or other cells. The results in this research are open to the same objections as those in Councilman's work, chief among which is the lack of absolute proof that these appearances are really alive in the absence of observed motion.

Symptoms of Scarlet Fever.

Dr. William Thomas Corlett called attention to the spurious forms of scarlatina encountered in septic wounds and found following various ingested substances. He illustrated, with stereopticon views, the rash of scarlet fever as it appears in cases of moderate severity, and following its regular course. He demonstrated that on the upper part of the trunk the exanthem usually forms a solid erythematous surface, whereas on the lower parts of the trunk, and especially on the lower extremities, the eruption is often patchy, such as is commonly observed in measles. He then went into the differential diagnosis between scarlet fever and measles, throwing on the screen cases of measles in which the eruption had completely merged on the upper part of the trunk, while on the other parts of the body it presented a normal appearance. In such cases Dr. Corlett pointed out that one must rely on the accompanying symptoms, such as coryza and photophobia with bronchial cough in measles, and angina and frequent pulse rate, together with a common onset of vomiting in scarlet fever. The color of the eruption in the two affections might likewise be distinguished, being bright pink to scarlet in scarlatina, while in measles a bluish or purplish tint gives character to both the exanthem on the mucous membranes as well as the exanthem on the skin. He dwelt likewise on rötheln and said that it might be called the fourth disease, or more properly, the forty-fourth disease, if one chose to recognize as an affection *sui generis* all of the departures from the normal encountered in this special class of affections.

Dr. Corlett then threw on the screen numerous illustrations of German measles or rötheln, first showing those in which the disease approximated more closely that of scarlet fever, then in a graded series those which more closely resembled the rash of measles. He maintained further that the mildness of the symptoms, together with the enlargement of the lymphatic glands, was the chief distinguishing diagnostic feature of rötheln. He spoke of the malignant forms of scarlet fever, and said that in many instances, especially when hemorrhages occurred, a diagnosis was most difficult, and in many instances was not made until after a fatal termination.

The Management of Scarlet Fever.

Dr. Carlyle Pope said that owing to the great danger of nephritis following the disease, the bath treatment has to be used with special care. The warm bath seems to be especially dangerous because by promoting free diaphoresis a urine of high concentration is thrown on the kidneys. This, however, can be avoided by giving the patient plenty of water to drink, and this latter treatment is to be recommended in all cases for the purpose of keeping the toxins in as dilute a solution as possible. Reference was also made to the use of urotropin throughout the disease, as reported by Wiedowitz, who cites 162 cases of scarlet fever treated by urotropin without a single case of nephritis as a sequel. Dr. Pope also advised caution in the use of the nasal syringe, in septic throat affections, as, on account of the large size of the eustachian tube and low position of its orifice in childhood, the danger of producing otitis media is especially great.

Throat Complications in Scarlet Fever.

Dr. J. Lamson said that sore throat in a varying degree of intensity generally complicates scarlet fever, the inflammatory process frequently extending into the middle ear and mastoid antrum, resulting in rapid and extensive necrosis of the drum membrane, and exfoliation of one or more of the ossicles. In the treatment of scarlet fever the hygiene of the mouth and pharynx is of the greatest importance. Many secondary complications can be avoided by properly cleaning the mouth and pharynx of the irritating exudates. A solution of biniodid

of mercury 2 gr. to the pint, peroxid of hydrogen, or 2 per cent. solution of carbolic acid gives the best results. For the middle ear complications early incision of the drum membrane, afterward syringing the ear with a solution of bichlorid of mercury, 1 to 1,000, is advised. If the suppurative inflammation extends to the mastoid antrum, early operation is the only safe course to pursue.

SEQUELÆ.

DR. WILLIAM T. HOWARD, JR., considered the proofs very conclusive that Professor Mallory has discovered the organism of scarlatina, although they can not as yet be positively so regarded. The discovery of specific bacteria as the causes of these exanthemata, of whose nature we are still uncertain, seems very doubtful. Bacteriologists seem to have exhausted their resources in searching for causative agents; there is a possibility, however, that these diseases may be due to sub-microscopic bacteria which so far have escaped observation.

DR. SEIBERT remarked on the almost constant occurrence of diarrhœa in fatal cases of the disease.

DR. ATKINSON thought that the nasal syringe was often unjustly blamed. It was generally employed in the bad cases only, those that were especially apt to show middle ear involvement. The eustachian tube was generally so swollen that water would be very unlikely to pass into it. Adults attending children, sick with scarlatina, were very liable to sore throat even if they showed no other symptoms of scarlatina itself.

DR. SAWYER thought that some remains of the protozoa should be found in the desquamated skin. A striking feature of scarlet fever cases was the rapid pulse; he had found the circulatic arrangement of the measles rash very useful in making a differential diagnosis.

DR. MALLORY said that they had not been able to trace the parasites beyond the prickle layer into the cornified layer, so that it would be difficult to prove their presence in the desquamated skin. Some observers claimed that the stomach was the avenue of infection and Dr. Seibert's observation as to the diarrhœa in fatal cases might support this.

Therapeutics.

[Our readers are invited to send favorite prescriptions or outlines of treatment, such as have been tried and found useful, for publication in these columns. The writer's name must be attached, but it will be published or omitted as he may prefer. It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in everyday practice. Proper inquiries concerning general formulæ and outlines of treatment are answered in these columns without allusion to inquirer.]

Infant Feeding.

FREEMAN, in the *Arch. of Pediatrics* for June, 1894, discusses the subject of feeding children after the first year. He believes that not only must care be exercised in the diet, but attention must be paid to the amount of rest, exercise, ventilation and exposure to fresh air. Each child should be a subject for special study as to the amount and sort of food it needs, but a very large proportion are materially aided by the diet. A healthy complexion, a clean tongue and well-digested movements are the best exponents of well-being in children. The secret of successful feeding after the first year is to keep the child largely on milk. He allows some other food, but there is less indication for a liberal and varied diet than is generally conceded. A child with normal dentition is properly able to grind its food at the age of eighteen months, hence milk may constitute the diet of the child well into the second year.

A healthy child at the beginning of the second year should be taking from eight to ten ounces of milk every four hours during the day, therefore the matter of the nutritive value of the first feeds need not be especially considered since the forty or fifty ounces of milk will furnish quite sufficient nourishment. He recommends that the food be taken with a spoon, should not displace the milk, but render it more digestible; this requirement being best met by one of the cereals, finely ground or strained and thoroughly cooked. For example, four ounces of a thick strained oatmeal or a wheat meal may be added to the midday meal and one-half ounce of orange juice may be given. It is a safe precaution to add one-half ounce of orange juice daily to the dietary of all children of six months or over. When fifteen months of age a soft-boiled egg may be added to the diet at the 1 o'clock feeding. The cereal is given at 6 a. m. and 5 p. m. The child has three meals, with the addition of an eight-ounce bottle of milk at 10 a. m. and 9 p. m. No change is made in the next six months except the addition of four ounces of clear beef, mutton or chicken soup, with a slice of dry bread and butter to the midday meal. Beef juice he does not give to the healthy child, but reserves that for the ill or anæmic.

About the twenty-first month meat is allowed in the form of scraped beef, one tablespoonful at first, for the noonday meal, and this amount soon doubled. The child should be taught to chew systematically. The soup should be increased to six ounces and the milk dropped at the midday meal. He believes that milk is not digested well when given with meat. The taking of prunes, apple sauce, cake, candies, etc., frequently disturbs the digestion and is responsible for the child refusing milk. When it is a question between no milk and only milk the latter alternative should be selected. Then, not force, should be used in bringing the child back to milk. During this second year water should be given once between feedings, or, best, an hour before each feeding.

During the third year the 9 p. m. feeding may be omitted. Breakfast at 6 a. m., eight ounces milk at 10 a. m., dinner at 1 p. m., supper at 5 p. m. For breakfast he recommends orange juice from one orange, ten ounces of milk, six ounces of any well-cooked cereal, soft boiled or shirred egg with bread and butter. For dinner eight ounces of clear soup, one to two ounces of meat, beef, lamb, chicken or turkey, lean and without gristle or skin and finely cut, not scraped, and so fed to it that the child chews it well. A small amount of dry bread, well boiled rice or some vegetable may be added. The first vegetables should be put through a colander, e. g., fresh peas, fresh string beans, lima beans or stewed celery, and later spinach. Mashed potato or squash may be given later. Junket is the best dessert, and may be alternated with rice pudding, custard, and occasionally a little ice cream. The total bulk of the meal should not exceed that of a pint of water. The supper should be a simple meal of ten ounces of milk, six ounces of gruel with bread and butter.

After the third year three meals a day are sufficient and should continue until the tenth year, the same type of meals being given as in the third year. The usual lunch, taken at 10:30 to 11 o'clock in school, spoils the appetite for the midday meal and makes too frequent a call on the gastric digestion.

At the age of 10 children may have breakfast and dinner at noon with the family. The evening meal is best served alone, as it should be taken early and be simple in character. Greater variety of fruit may be allowed, e. g., juice of grape fruit and grapes. Baked and stewed apples should be given with caution and without much sugar or cream. Stewed prunes and berries may upset the digestion of some children. Jams, preserved fruits and raw apples are apt to make trouble. Cereals of many varieties are given, ordinary grains being cooked about six hours; the prepared grains are best cooked about four times as long as the directions call for. Six to eight ounces of milk should be taken on the porridge and an equal amount drunk from a glass. Bread must be properly selected and butter may be allowed in moderation. Avoid hot biscuits, muffins, waffles, pancakes, fried and greasy foods, all stews and hashes, all pies and cakes and candies, most raw vegetables and fruits.

The author gives the following summary for the hygienic care of children: "Provision for the exercise of children should be carefully planned. At first by the use of the nursery

Save and the baby jumper, and later by systematic walks for short distances at a time, and still later by bicycling, horseback riding and tramps in the country. Throughout childhood they should be kept as much as possible out of close and crowded rooms. When in the house the room should receive ventilation from out of doors, and they should be kept in the absolute open air several hours each day."

Chronic Rheumatism.

Ribemont recommends the following:

℞. Potass. iodidi 3ii 4
Sodii salicylatis 3ii 8
Colchicin
Strych. sulphatis, āā ..... gr. ss 3ii

M. Ft. capsulæ No. xxx. Sig.: One capsule three times a day after each meal. To be taken in conjunction with:

℞. Sodii bromidi
Sodii phosphatis, āā ..... ℥i 30

M. Sig.: Teaspoonful in warm water every morning before breakfast.

Catarrhal Deafness.

Lucæ, in a communication, states that he has treated one hundred cases by the following method and a successful cure has been effected in a comparatively short time:

In the acute form of the disease limited to the anterior urethra injections of a 2 per cent. solution of protargol were used. When the posterior urethra was affected, either in acute or chronic forms, the following mode of treatment was used and the usual instructions as to diet, habits and hygiene were given: For the first five days injections of a 2 or 5 per cent. solution of protargol were used three times daily. The second five days a 5 to 5 per cent. solution of yellow mercuric of hydrastin was used three times daily. The patient is instructed to first empty his bladder; then, just as he is ready to inject, to make that peculiar downward pressure as in the act of urinating, force the medicine in and clamp the head of the penis with the index and middle fingers of one hand and hold there for from five to fifteen minutes. A half-ounce hard rubber syringe is of sufficient size. On every other day have the patient visit the office and massage the prostate gland. Sitz baths should be used daily.

Graves' Disease.

Rogers, in the *Wis. Med. Jour.*, gives the following treatment as followed out in thirteen cases of Graves' disease in which all but one recovered, and in most of them one or more of the physical symptoms disappeared. The length of time for discharge varies from one to six years. He concludes that all these patients are reduced physically and call for constitutional measures. All cases will not improve under the same treatment. Some few yield only to surgical interference.

REST.

The author emphasizes the importance of this measure no matter how slight the case may be. "In no class of cases does the Weir Mitchell method prove so successful as here." This is many times very difficult to carry out, but the "rest cure" should be advised and carried out as faithfully as possible, with careful regard for details, for at least six weeks. In cases where the rigid "rest cure" can not be carried out, the patient should be advised to lead as quiet a life as possible, avoiding all unnecessary fatigue of body and stress of mind. Certain hours should be set aside daily for rest in a recumbent position. Late riding and early retiring should be the rule.

DIET.

"The diet should be carefully regulated, allowing the patient simple yet nourishing food from four to six times in each twenty-four hours, avoiding all articles of diet tending to produce gastric or intestinal fermentation and thus avoid further irritation to an already irritable heart. Many of these cases have an annoying and exhausting diarrhea, and hence there is all the more need of careful attention to the diet. In some instances the lax condition of the bowel yields only to a liquid diet and astringent medication such as Dover's powder, bismuth subnitrate and beta-naphthol."

MEDICINAL.

For the nervous, irritable and sleepless condition the author recommends the following:

℞. Sodii bromidi
Potass. bromidi
Ammon. bromidi, āā ..... gr. ii 12
Liq. potass. arsenitis ..... m. ii 12
Tincturæ nucis vom. ..... m. iv 24
Aquæ camphoræ q. s. ad ..... ℥i 4

M. Sig.: Give half an ounce of such a solution well diluted three to four times a day.

Or, codein in dose of one-fourth to one grain three to four times daily, is more satisfactory where the bromids cause gastric disturbance. Sulfonal in three to five grain doses, six to eight times in twenty-four hours, has an excellent sedative and hypnotic effect. Combined with or in some cases as a substitute for these remedies, suggestion, baths, massage and faradization may be used.

For the tachycardia or irregular heart action, rest, an ice bag over the precordium, the tincture of belladonna in increasing doses or the sulphate of atropin hypodermically. He believes the usual cardiac sedatives are disappointing and digitalis fails to produce any permanent effect.

The author believes that galvanism frequently and perseveringly used is efficacious in lessening the size of the goiter and reducing the number of heart beats. The treatment is best given with the patient in the recumbent position and administered two or three times daily. The negative pole is applied over the thyroid gland or over the sympathetic nerves, the positive over the occiput or between the shoulders and using a current of three to eight milliamperes for from three to five minutes.

The author considers the hypodermic injection of any substance into the thyroid gland and the internal administration of any preparation of the thyroid gland as absolutely contraindicated.

The following formula has also been recommended for exophthalmic goiter with irregular and rapid heart and nervousness:

℞. Potass. bromidi 3ii 8
Infusi digitalis q. s. ad ..... ℥viii 240

M. Sig.: Tablespoonful in water every six hours.

Cardiac Adynamia in Infectious Diseases of Children.

Nouveau Remède recommends:

℞. Spartein sulphatis ..... gr. iss 1
Aquæ dest. ..... ♏xiss 25
Syrupi cerasorum ..... ♏xss 25

M. Sig.: For a child three years of age, two coffeespoonfuls daily; five years, five coffeespoonfuls; ten years ten coffeespoonfuls.

Medicolegal.

Special-Tax Liability of Physician Furnishing Liquor.—The United States Commissioner of Internal Revenue ruled, July 11, 1904, that a practising physician who, without holding the special-tax stamp of a retail dealer under the internal revenue laws of the United States, furnishes his patients with distilled spirits, wine and malt liquors under conditions constituting sales of these liquors directly or indirectly, involves himself in liability to criminal prosecution under these laws, unless he shows that the liquors thus furnished have been compounded into medicines by the addition of some drug or medicinal ingredient. If the liquors are not so compounded he can not sell them even for medicinal use only without involving himself in special-tax liability.

Requirement Not Met by Abbreviation in Prescription.—The Missouri statute enacts, as a condition precedent to legalizing sales of intoxicating liquors in pharmacies for medicinal purposes, a statement in writing from a registered and practising physician, in good faith, that such liquor was "prescribed as a necessary remedy." The St. Louis Court of Appeals holds that the abbreviated form, "P. N. R.," used in a prescription, and

relied on as a defense in the case of State vs. Manning, could neither in language nor in substance, by the use of the initial letters P. N. E., which have neither customary signification nor usual interpretation, nor any accepted meaning of which judicial notice can be taken, be regarded as a sufficient compliance with the law, which in explicit terms provides for the wording of the prescription.

Compensation for Care of Illegally-Committed Insane.—The Court of Appeals of Kentucky says, in Michaels' vs. Central Kentucky Asylum for Insane, that Michaels was committed to the asylum, and the latter was seeking to recover compensation for taking care of him. The proof showed that he was in fact insane, and that it was necessary for him to be in an insane asylum, though the inquest, being held without notice to him or his presence at the trial, was void. As he was in fact insane, the asylum might recover for necessaries furnished him on a quantum meruit (as much as it deserved), just as a recovery may be had for necessaries furnished an infant. But it appeared that Michaels, while an inmate of the asylum, except for the first few months of his confinement, worked for it, driving a cart, digging a ditch, and doing other such work on the farm run by it, he being a stout man, and able to work. Continuing, the court says that when the asylum claims under a quantum meruit for necessaries furnished one who has not legally been found of unsound mind, its claim rests on the idea that it should be allowed compensation in justice and right for that which it is out on account of the lunatic. If the lunatic's services have been worth to it as much as his keep was worth, it is in fact out nothing. A man who takes care of an infant, and seeks compensation on a quantum meruit for necessaries furnished him, would not be allowed anything if it appeared that the infant's services, while being so kept, were of as much value as what he received. The same principle must be applied to the asylum when it comes to claim for keeping one who has not legally been found of unsound mind, and committed to it for safe keeping. Where the inquest is legal, then the statute regulates the rights of the asylum. The state, in that event, requires that the patient be received in the asylum, and has regulated by statute on what terms he shall be kept. When the asylum claims in such a case for the keeping of a patient, its claim rests on the statute, and no allowance can then be made for the labor of the patient, as the statute provides for none. But when the inquest is illegal and void a different rule must apply, for then the claim of the asylum against the lunatic must be determined wholly on common law principles, and, while it may recover for necessaries furnished the lunatic on a quantum meruit, it must credit him on the claim by what it has received from him in labor or otherwise. So, as on all the evidence in this case the court concludes that the labor of the lunatic was of value as much as his board and keep at the asylum during the time sued for, it holds that no recovery, during this period, for his keep could be allowed.

Privileged Communications Under the Indiana Statute.—The Supreme Court of Indiana says, in the case of Towles vs. McCurdy, that the provision of the statute is in these words: "The following persons shall not be competent witnesses: . . . Fourth—Physicians, as to matter communicated to them, as such, by patients, in the course of their professional business, or advice given in such cases." Communications from a patient to his physician were not privileged at common law, but they have been made so by statute in many jurisdictions. The construction given to the statute forbidding the disclosure in evidence against the will of the patient of communications made to the physician in the course of his professional business has been much broader than the language of the act, and the prohibition has been held to include not only communications and advice, but all information acquired by the physician while treating or attending the patient in his professional capacity. It must be regarded as settled that the prohibition of the statute (subject to the qualification that the objection founded thereon may be waived by the patient himself, or by those who represent him) extends to all communications made by patients to physicians in the course of their professional business, to all advice given, and to all information acquired by the physician, by observation or otherwise, by means of his professional relation to his patient and in his professional intercourse with him. All that the physician sees or observes is as fully within the statute as matters which are communicated to him by his patient. The testimony objected to in this case, where a will was presented for probate, related to facts discovered and information obtained by the witness while visiting and treating, or being consulted by, the decedent, as his physician. The court says that it follows from what has been said that the witness was not competent to testify concerning these matters, unless the objection to the evidence, which was made by those offering the will for probate, was waived by those who stood in the place of the decedent, and were authorized to represent him, or unless the statutory rule does not extend to cases where the controversy is among heirs and devisees over testamentary dispositions. For obvious reasons, when the controversy is among heirs and devisees, the set of such heirs or devisees who strive to overthrow the will can not, for their own benefit, and against the wishes of the other set, who desire to sustain it, waive the objection to evidence otherwise incompetent, to the detriment of those who seek to establish the will. The words of the statute declaring attorneys incompetent to testify as to confidential communications made to them in the course of their professional business, and as to advice given in such cases, are almost the same as those relating to physicians. It was held in Kern vs. Kern, 154 Ind. 29, that the rule in regard to confidential communications made to attorneys does not apply to testamentary dispositions, where the controversy is between the heirs and devisees of the testator. The Supreme Court of Missouri, in Thompson vs. Ish, 99 Mo. 160, held that a like exception should be made as to the testimony of physicians. The same view was taken by the Supreme Court of Iowa in Winters vs. Winters, 102 Iowa, 53. See, also, Russell vs. Jackson, 9 Hare, 387, and Hageman's Priv. Com., sec. 86. This court, however, in Brackney vs. Fogle, 156 Ind. 535, expressly decided that the rule announced in Kern vs. Kern, above mentioned, did not apply to the testimony of physicians, and that even where the controversy was confined to the heirs and devisees of the decedent, the physician of the decedent was incompetent to testify in regard to communications made to him by his patient, or facts learned by him in the course of his business as such physician. According to that case, the evidence objected to in this case was not competent, and the court holds it was error to overrule the objections to it.

Current Medical Literature.

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

American Medicine, Philadelphia.

July 9.

1 Fractures of the Extremities: A Report of 1,000 Consecutive Cases Verified by Radiographs. G. G. Ross and M. T. Wilbert.
2 Observations on Smallpox Prevailing in Pennsylvania Since 1898. George G. Graf.
3 *The Carotid Body; Anatomy, Histology, Embryology and Tumors Arising from It. John Funke.
4 Concussional Vertebral Reflexes. Albert Abrams.
5 *Fluorescent Transillumination of the Stomach. Solomon Solis Cohen.
6 Version in Delayed or Obstructed Labor. Daniel Laugaker.
7 The Ideal Physician. H. D. Didama.

3. **The Carotid Body.**—Funke describes in detail the anatomy, histology and embryology of the carotid gland, and also the gross and microscopic pathology of tumors arising from it. These tumors have been mistaken for tuberculous lymph nodes, lipoma, fibrolipoma, lymphosarcoma, aneurism and aberrant thyroid; on superficial examination, cystomas of the neck may be mistaken for tumors of the carotid body.

Tuberculous lymph-nodes are entirely hard or entirely fluctuating and multiple. As a rule, these nodes involve the surrounding structure and may be tender; lipomas are more superficial, are softer, and less consistent; although fibromas are harder than the carotid tumor, and are rarely found at this site, yet should they develop here it would be very difficult to differentiate them from the carotid tumor. According to Hopkins, palpation and measurement rule out lymphosarcoma. Recius observes that lymphosarcomas are hard, malignant, everywhere adherent and of rapid growth. Absence of expansion rules out aneurism; Hopkins feels

fore extension by the absence of syphilitic infection and although in his case, "the most marked objective abnormal thyroid by the distance of an enlarged thyroid gland; Berlin says he has never seen an aberrant thyroid as high as the thyroid cartilage. Cysts of the neck are congenital, fluctuating; tapping gives either a light straw colored or clouded fluid; as a rule, they are encapsuled.

8. Fluorescent Transillumination of the Stomach.—Cohen uses a diaphane similar to Einhorn's, except that the socket of the lamp is made in two separate parts, permitting a new lamp to be substituted in a moment for one that has been burned out.

The patient is given quinin bisulphate, .13 gm. (2 gr.) three times daily before the examination, and the fluorescin solution is made up some hours previous to the use. To examine a number of cases in succession in the dark room 1 liter of solution No. 1 and solution No. 2 prepared, and each patient was given a tumblerful of each solution to drink about two or three minutes before the lamp was introduced. Solution No. 1 consists of sodium fluorescin in distilled water, .162 gm. (2½ gr.) to the fluid ounce. Solution No. 2 consists of the same body prepared and mixed with the addition of 1.5 c.c. (¼ fl. dr.) of glycerin and 10 c.c. (½ fl. dr.) muriatic to the pint. By taking a half pint of each solution the patient has mixed into the stomach 3 c.c. (½ gr.) of fluorescin, 7.5 c.c. (1 fl. dr.) of glycerin, and one pint of distilled water. 1 fluid dr. of muriatic acid to the pint of fluid. Exner found that a greater proportion of fluorescin diminishes the illumination.

New York Medical Journal.

July 21.

9 Stone "Liver" Cases. J. H. Chittenden.
9 The Invasion of Typhoid Fever in the Nervous System. Pearce Bailey.
10 The Differential Diagnosis Between Incipient Pulmonary Tuberculosis, Healed Cavities and Non-tuberculous Fibrosis. Morris Manges.
11 Congenital Inspiratory Laryngeal Stridor, with Report of a Case. Samuel Kahn.
12 The Dysentery of the Tropics, with Special Reference to Our Troops in Porto Rico. Paul F. Munde.
13 Treatment of Nocturnal Incontinence of Urine. Frank P. Davis, Jr., Thomas W. Salmon, Evelyn Witmer and L. H. Bonney.

9. Stone "Liver" Cases.—Carstens refers to the old-time subterfuge of saying "your liver is out of order," when we really did not know exactly what the trouble was. All abdominal troubles were referred to the liver, were they intestinal, indigestion, autoinfection, constipation or diarrhea. Cathartics were used, and with a good deal of benefit, as the deep lesion of the abdominal viscera relieved them and caused a free secretion from the mucous membrane that lubricates the intestinal tract. At the present time any ordinary physician is able to diagnosticate the case sufficiently to know just what organ is affected. However, if he decides that the trouble is in the liver, it is still very difficult in a great many cases to say what the exact condition is, and in some cases it is impossible to make a diagnosis. An operation will often clear up the question, but even then a microscopic examination may be the only means of making a diagnosis. The author cites a number of cases of mistaken diagnoses by physicians on which he operated later. One case had suffered from so-called acute gastritis for twenty years; on operation it turned out to be a case of gallstones. Another case, one of suppurating gall-bladder, was said to have suffered for two years with malaria. In a third case, a diagnosis of a tumor or growth of some kind was made, which on operation was found to be a floating liver and kidney. Another case was referred for operation because of inflammation of the ovum. Both ovaries were removed and the uterus ventrofixated. There was a great deal of suppuration, from which the patient recovered. Later she began to have pain from so-called perityphlitis, and a tumor developed. On operation it was found that she had gallstones, a ventral hernia, and a fibroid uterus. Carstens closes by saying: "The great thing in the practice of medicine is the diagnosis. For the treatment, the ignoramus can look in the text books."

10. Differential Diagnosis Between Pulmonary Tuberculosis, Healed Cavities, and Non-Tuberculous Fibrosis.—As the result of a year's experience at the Phipps Institute, Norris emphasizes the fact that the significance of physical signs, as currently taught, when viewed in the light of autopsy findings, is often stultifying and apparently contradictory. The differential diagnosis between the conditions embraced in the title is a very puzzling one. The greatest care should be exercised to ascertain and carefully weigh all the facts obtainable concerning the patient's past history and mode of life; the probable duration of the disease, the occurrence of hemoptysis, the history of an attack of typhoid pneumonia, pleurisy, or grip treated indoors. Repeated examinations are advisable before committing one's self to a diagnosis. In cases of true incipient pulmonary tuberculosis it is often possible to differentiate from a healed cavity. The results obtained from percussion are not as satisfactory as those obtained by auscultation. The fine localized crackling rales, heard especially at the end of inspiration are not easily confused with the larger, louder, metallic clicks, which speak so volubly of cavity. The blowing amphoric note and whispered cavernous pectoriloquy are not readily confused with the suppressed breath sounds, respiratory harshness, bronchovesicular or bronchial breathing, whichever the incipient case may present. If the cavity is contracted or filled with secretion, Winternitz's or Gerhardt's change of note may be of great assistance, as may also Friedrich's sign. Cavities are more frequently overlooked than erroneously diagnosticated when absent. The diagnosis of incipient pulmonary tuberculosis from non-tuberculous fibrosis frequently is impossible. If the fibrosis is confined to one lung vicarious functional emphysema will probably exist on the other side, more so than in incipient tuberculosis. Extensive fibrosis with marked thoracic retraction, displacement of the heart, etc., is not so hard to distinguish. In either of the foregoing conditions useful information may often be obtained from the use of the fluoroscope and the laryngeal mirror.

Boston Medical and Surgical Journal.

July 21.

14 Animal Experimentation. Harold C. Ernst.
15 *A Study of Amputations of the Lower Extremity. Fred T. Murphy.
16 *Experimental Decapsulation of the Kidneys. H. H. Clifford.
17 Functional Albuminuria, with a Report of a Case. J. Bergen Ogden.
18 Coagulation-time of the Blood. F. T. Murphy and A. H. Goodall.

15. Amputations of the Lower Extremity.—In order to get an idea of the type of cases and the immediate results before leaving the hospital, Murphy abstracted the records of five hundred cases of amputations of the lower extremity. A list of questions was sent to each patient and another list was sent to eleven of the best-known makers of artificial limbs. As a result of his study of these cases Murphy presents the following conclusions:

Anterior and posterior muscle flaps when obtainable are to be preferred to the circular cuff of skin.

The fibula should be cut off at a higher level than the tibia in leg amputations, and care should be taken to bevel off bony prominences such as the sharp anterior tibial edge.

Suture of the periosteum and approximation of the muscles and fascia is desirable.

Drainage of the stump is advised, unless the dead space is obliterated by means of buried sutures.

Partial amputations of the foot or amputations at the ankle-joint, except under unusual conditions are not as satisfactory as those above the ankle joint.

Tibial stumps between 6 and 8 inches long are the most serviceable.

Amputations through the knee joint are inferior to those just above the condyles.

The longer the thigh stump the better, provided the condyles have been removed.

In general, in tibial amputations down to 4 inches and in thigh amputations down to 5 inches, sacrifice bone in order to obtain good muscle flaps.

16. Experimental Decapsulation of the Kidney.—Clifford presents the results of a year's work on the experimental decapsulation of kidneys in rabbits, in normal dogs, in dogs with induced nephritis, in dogs with an infarct of kidneys, and in dogs with normal kidneys, but with additional work thrown on them, and summarizes his paper as follows:

1. In all my cases of two days and under and in my controls the entire thickness of the capsule had been removed over two-thirds of the surface by the operation of decapsulation.

2. There is a certain amount of intracapsular tension in uncapsulated kidneys, normal or with nephritis, as shown on removal of capsule.

3. There is an immediate increase in size of decapsulated kidneys persisting up to one month at least; afterwards, a decrease to approximately normal size completed at end of six months.

4. There is congestion, moderate in degree, most marked in the intercapsular blood vessels in cortex, lasting three to five days after the operation.

5. No histological changes in the renal epithelium follows the operation of decapsulation or autopsy.

6. A new capsule regenerates in first two to four times thickness of old, is well marked at the end of eight days. At end of six months it returns to approximately the normal thickness and vascularity. The new capsule arises chiefly from the connective tissue cells of the intercapsular connective tissue, but in part from the epithelioid connective tissue which is present in the new bed of the kidney.

7. No new vessels are formed which anastomose with those of the kidney.

8. The increase in size is due primarily to the increase in blood supply, possibly resulting from the removal of the capsule.

Medical Record, New York.

July 23.

19 *Prolific Complicating Pregnancy. Edwin B. Cragin.
20 The True Education of Girls and Boys. Richard Cole Newton.
21 Study of Intestinal Perforation and Peritonitis in Typhoid Fever. A Report of Three Successful Operations, and a Statistical Investigation of 366 Operative Cases. William D. Haggard.
22 Improvements in Anesthetic Apparatus and Technic. James T. Gwathmey.
23 *Hay Fever, Some Practical Suggestions as to Its Management and Treatment. Ralph W. Parsons.

19.—See abstract in THE JOURNAL, xlii, p. 1004.

20. Treatment of Hay Fever.—Parsons discusses the treatment of hay fever under three separate heads: (1) Constitutional; (2) local; (3) treatment of the exacerbation. For building up the nervous system, he advocates the daily morning cold plunge taken immediately on rising, followed by vigorous rubbing with a coarse towel. The use of the bath should be recommenced several weeks before the usual time of the hay fever to make its appearance. The mode of life, diet, and exercise should be regulated. Suitable clothing and shoes should be worn to prevent taking cold. The sleeping-room should be well ventilated. Nerve tonics, such as strychnin, arsenic, and phosphorus are indicated. A thorough examination should be made of the nose and nasopharynx of every patient suffering from hay fever, with a view to correcting any existing chronic inflammatory condition or obstructive lesion. It is advisable to begin the treatment of local conditions in the spring, or at least several weeks before the time when the symptoms of hay fever usually make their appearance. This plan of treatment may need to be renewed at the same period for two or three years before marked improvement in the nervous centers can be expected. In the treatment of the exacerbation it is well to give due attention to the possibility of uric acid being a factor in the causation of the malady. The internal administration of the mediumized extract of the dried suprarenal gland and the active principle of the gland in the form of a nasal spray, are very efficient. By some suprarenal extract is considered a specific. It is given in .5 gr. doses every two hours, day and night, until dizziness or palpitation is observed, or until the vasomotor paralysis in the nasal mucous membrane is controlled. Then the intervals between doses are increased. Solution of adrenalin is best used as a spray in the proportion of 1 to 5,000 in normal salt solution. Its use may be preceded by a mild alkaline solution and followed by a bland oily spray. The quantity and irritating quality of the secretion of the nasal mucous membrane is diminished by treatment of the uric acid diathesis, treatment of the intranasal pathologic conditions and the use of the suprarenal gland. Complicating conditions such as asthmatic paroxysms and bronchitis should receive proper treatment. The use of camphor, the cold spinal douche, the ice bag applied to the back of the neck and the upper portion of the spine, change of climate, are mentioned as adjuvants in the treatment of the hay fever. The use of opium, alcoholic stimulants and cocain should be avoided.

Medical News, New York.

July 23.

24 The Relations of Surgery to the Surgeon. Advocate in the Knowledge of the Patient. George Woodbury.
25 *The Cure of Cancer. Its Relation to Surgery in Chronic Nasal Accessory Sinus Disease. E. B. Cragin.
26 Treatment of Lobar Pneumonia in the Adult. Wm. H. Robinson.
27 *Gastroptosis. A. Rose.
28 Treatment of Tuberculous Tuberculosis. Joseph B. Bissell.
29 Cocainism. Charles J. Douglas.
30 *The Intraperitoneal Relations of the Appendix Vermiformis to the Posterior Portion of the Cecum, with the Report of a Fatal Hitherto Undescribed. D. R. Lyman.
31 A Medical Science. C. C. Hall and J. M. Longaker.

25. Surgery of Chronic Nasal Accessory Sinus Disease.—Cragin discusses the results of his observations on some two hundred cases of chronic disease of the different nasal accessory sinuses treated radically, and on one hundred and ten cases treated conservatively. In a minority of these cases he operated himself, and assisted at all the remainder. He found that fully one-half of all chronic empyemas of the antrum are simple; that is, disease in the other sinuses had shown itself neither by symptom nor sign. By far the greater number of cases can be treated successfully conservatively, and recourse to radical operation should be had infrequently. It should be remembered that the local condition will improve much more rapidly when the general health is cared for. The application of conservative treatment to chronic empyema of the antrum may be considered under three methods: the alveolar, that of the canine fossa and the intranasal. Operation through the alveolus is applicable to uncomplicated cases only, and should never be considered the operation of choice. The cases may be said of the method of operating through a small opening in the canine fossa. The best results from conservative surgery must be expected from intranasal methods. The first step is to establish free nasal respiration and to correct any pathologic condition that may exist. One should never resort to radical surgery because the symptoms are severe, the pus foul, and the physical depression profound. The most chronic cases are not always the most difficult to treat, nor do they always require radical measures. When it becomes necessary to resort to a radical operation, the so-called Luc-Caldwell operation, or some modification of it (such as the one employed by Jansen), should be chosen. The best operation for opening on the frontal sinus is that of Killian. Frontal sinus operations are indicated at the time of operation cause dubiously. Great care must be taken of the eye to prevent the occurrence of accidents, such as wounding the pulley of the superior oblique muscle, causing diplopia, and disease of vision due to intra-ocular causes—hemorrhage, conjunctivitis and intraocular suppuration—iritis, neuroretinitis.

27. Gastroptosis.—This term is applied to the condition which is commonly called gastroptosis, and which Rose says is identical with relaxation or atonia; it is atonic gastrica. This condition may exist without motor insufficiency. Such insufficiency may occur under circumstances in a healthy stomach when the mass of ingested food is too large, or the nature or condition of the ingesta unsuitable. Atony may cause insufficiency, but is not of itself insufficient. It may exist without insufficiency, when the resistance of the pylorus is subnormal, and it may be caused by insufficiency. There is no gastroptosis without dilatation. Of practical importance is the relation between gastroptosis and gastric and nervous symptoms. Many cases which formerly were classified as nervous dyspepsia are cases of gastroptosis with gastric and nervous symptoms. The principle in the treatment of gastroptosis is relief from relaxation; first of all of abdominal relaxation by means of support of the abdominal wall by strapping, as suggested by Rose. Very often strapping alone will restore the secretory and motor functions to a normal state. Medical treatment without mechanical support may be useless.

30. Unbenetted Form of Extraperitoneal Relation of Appendix to Posterior Surface of Cecum.—The form referred to by Briggs was seen in a case of appendicitis operated on by himself. The cecum and appendix were readily located, there being no adhesions. The appendix emerged from the cecum at the usual point, a little internal and slightly posterior to the projection of the caput. Curving gently on itself in a downward and backward direction, what appeared to be the tip of the appendix seemed attached to the cecum by an adhesion about 1.5 cm. below the appendiceal base. This at first appeared to be the entire appendix and measured 2.5 cm. There was a meso-appendix arising from the under or left layer of the mesentery of the extreme distal portion of the ileum. The meso-appendix was about 2 cm. long at the base of the appendix and about 4 cm. along its free border, reaching what appeared to be the adherent tip of the appendix. This free border was nowhere attached to the parietal peritoneum, so that the apparently adherent tip of the appendix could be completely surrounded by introducing the finger from the outer side underneath the appendix, beneath the meso-appendix, and out again below the free border of the meso-appendix. This undoubtedly was a primary anatomic condition and not one resulting from inflammatory adhesions.

St. Louis Medical Review.

July 2.

32 *Diagnosis, Etiology and Prophylaxis of Yellow Fever. F. Formad.

35. Yellow Fever.—Tornabene reviews the symptoms of yellow fever with special reference to diagnosis and prophylaxis, and also the history of the investigations made by the United States government for the purpose of determining the specific cause and method of propagation of the disease.

Virginia Medical Semi-Monthly, Richmond.

July 8.

36 *Progress in Aural and Ophthalmic Therapeutics. D. B. St. John Roosa.
36 History of Chickamauga Hospital and Its Medical Officers During 1863-64. John A. Octerlony.
37 Preventive Medicine. O. L. Miller.
38 *Tuberculosis of the Larynx. Jos. P. Bryan.
39 Why Not Abolish Quarantine. W. F. Rose.
40 Some Observations on the Prevention of Rural Diseases. W. Lee Lewis.
41 Medical Experiences. James R. Wm.

36. Aural and Ophthalmic Therapeutics.—Roosa gives a brief review of the progress made in aural and ophthalmic therapeutics. Among other things he mentions the spray and sniffer in the treatment of tracheitis, and recent work of Shultz in the subject of tuberculous iritis. Shultz believes that the administration of a preparation of iodin, iodoglycol, combined with mercuric peptonate Le Prince, will not only cure tuberculosis of the iris, but also holds out something for pulmonary tuberculosis.

38. Tuberculosis of the Larynx.—Bryan reports a case of tuberculosis of the larynx in a boy 8 years of age, who took cocoa a day for three days a dose of 2/3 gr. of calomel. Another case, a boy 14 years old, died from mercurial poisoning (necrosis of lower jaw) produced by one dose of 5½ gr. of calomel.

Brooklyn Medical Journal.

July.

42 *Hypnotism. Wm. H. Hamby.
43 Some Points Worthy of Note in Gall Bladder as We Do the Operation. Geo. Ben Wood.
44 Pulmonary Tuberculosis. Its Cause, Prevention and Cure. Wm. Brodie.
45 Indications of Cystitis, Including Surgery, in the Removal of Uterine Growths for Cancer. E. E. Montgomery.

42. Hypnotism.—This disease, named after its discoverer, Indians, is caused by a parasite finding entrance into the body in some way not yet clearly understood and setting up an inflammation in the various tissues infected. For a time it was thought that the only source of the disease was drinking the water of certain streams in Egypt and South Africa, but closer observation has demonstrated the danger of infection to be equally great from digging in the soil, or from bathing in such waters, the parasite entering through the rectum, vagina, urethra or abrasions of the skin. It would seem that the eggs deposited by the female in the bladder or intestines are carried by the lymph stream into the tissues and there, perhaps, partly transformed or emboli from the vessels to other organs. No organ is exempt from their invasion. The portal vein usually contains great numbers of them, and the liver is quite extensively involved, the lesion produced being not unlike nutmeg liver. The various pathologic lesions are found in the lower colon, sigmoid flexure, rectum and urogenital system. The morbid changes in the blood are a slight leucocytosis, an enormous increase in the eosinophile leucocytes with a proportional diminution in the polymorphonuclear leucocytes. Less frequent is an increase in the large mononuclear leucocytes, and when this is present it is accompanied with a diminution of the lymphocytes. The disease has become much more widespread, several cases having been seen in New York, some in Canada, and one case in the West Indies. During the Boer war many men in the British army were invalided home because of their sufferings from this disease. The pathology of bilharziosis is an inflammation of the mucous membrane, followed by the formation of new fibrous tissue that replaces the glandular elements. Quite frequently there is a great overgrowth of the normal elements of the parts attacked, with the formation of polypi and growths taking on all the clinical characteristics of malignant disease. It is noteworthy that many cases die of intercurrent cancer, either sarcoma or carcinoma of the bladder and rectum. The diagnosis is confirmed by the discovery of the ova in the urine or in the mucous discharges from the rectum. A brisk cathartic or saline purge will bring away great numbers of them. The urine should be centrifuged. The symptoms first complained of are malaise, backache and pain referable to either the bladder or rectum, and there may be a discharge of a viscid yellow or greenish-yellow mucus, sometimes mixed with blood, from the rectum. Tenesmus is severest and persistent. The prognosis is more grave in some countries than in others, especially in Egypt. An early diagnosis and prompt treatment are of the greatest importance.

Denver Medical Times.

July.

44 *Considerations Regarding Medical Inspection in the Public Schools. Edward Jackson.
45 Anatomical and Surgical Relations of the Bronchial Tubes—Preliminary Work. Daniel R. Brower.
46 Retrospect: Practice; Surgery; Examination; Complete Blood-Count. Wm. E. Hinds.
47 Day of the Trial Card in Connection Errors of Refraction, or Objective Optometry. Edward J. Cox.

44. Medical Inspection of Public Schools.—This subject is discussed by Jackson, who says that school hygiene must include attention to school disease within the schools and provision for its treatment; the immediate suppression of epidemics; the recognition of all physical defects among the pupils, with steps to help secure their correction so far as possible; maintenance of the best sanitary conditions throughout the whole school environment of the child; the training by verbal instruction, exercises and habitual practice of general and individual hygiene; and the inspiring in every scholar of the same reverence for health that we seek to instill with regard to patriotism or moral obligation. Medical inspection of schools is the chief agency to which our knowledge of vital processes and disease is to be applied. The work of medical inspection in the public schools is directed obviously to three purposes: (1) The detection of and limiting the spread of contagious disease; (2) the study of physical defects and other departures in health with instruction of the remedy; and (3) supervision of the scholar's environment and the instruction regarding hygiene. The qualifications demanded of those who are to carry on this work are skill in diagnosis, at least an outline knowledge of what is required to meet each pathologic condition discovered; the medical inspector must have a broad, definite practical knowledge of hygiene, including the factors which produce disease and those which guard against it. In many chronic cases the school physician should perform another very important function. Through him the practitioner in charge of the case should be able to secure that modification of school routine which the interests of his patient require, such as special light, or seating, or hours of work; the arrangement of a special course of physical training, or the modification of the course of instruction to meet the needs of that particular child. This work will be best done by a class of practitioners who devote their whole time to this and similar work, and it may become necessary that special training for the duties of school physician be given in a standard medical college, to be followed by a certain number of years, say three, of general medical practice. These men must have a thorough course in hygiene, both personal and public, including some practical skill in bacteriology. The thing required of the members of the medical profession is a frank, hearty recognition of this new specialty; recognition of its importance, its scope, the difficulties necessarily encountered by those entering on it, with the possibilities it offers of useful employment for a certain number of educated physicians.

Illinois Medical Journal, Springfield.

July.

48 *Use and Abuse of Drainage. J. H. Stealy.
49 *Subconjunctival Injection of the Alkaloidal Salts and Viscera. D. H. Beckwith.
50 *Tuberculosis of the Nervous System. J. Grinker.
51 Report Relative to Experiments in Cultures with Reports of Two Autopsies and Two Non-tuberculous Cases That Illustrate Points in Diagnosis. Robert H. Babcock.
52 *The Surgical Treatment of Pulmonary Tuberculosis. Nathan P. Hatfield.
53 Report of Examinations for Admission to the City Medical Offices. F. H. Wilson.
54 The Question of Preventive Medicine a Factor in the Social Evolution of Society. Wm. Brodie.
55 Some Results of Cancer of Internal Organs. L. L. McArthur.
56 *Cancer. Its Nature and Treatment. L. Spencer Pilcher.
57 Chronic Bronchitis Occurring in Elderly People, with Special Reference to Treatment. R. H. Babcock.

48.—See abstract in THE JOURNAL, xlii, p. 1511.

49 and 52.—Ibid., p. 1441.

V 43
1904

66. Method Case of Inguinal Hernia.—All operators have come to the conclusion that to strengthen the weak point of the abdominal wall in the treatment of inguinal hernia certain structures must be restored to Poupart's ligament. McArthur aims to show that it is feasible to close the inguinal canal with the patient's own living tissue. Having made the usual skin incision, exposing the external ring, the latter is prolonged upward in the line of separation, paralleling exactly the tendinous fibers of the external oblique muscle to its commencing muscular insertion. This divides the aponeurosis of the external oblique into an external and internal flap. The cord having been treated according to the preference of the operator, a bunch of white fibers which enter into the formation of the internal pillar of the ring are split off from the edge of the internal flap of the external oblique, quite up to their insertion in the muscle belly, where they are cut loose from the muscle, but left attached to the spine of the pubes. This strip should vary in width according to the diameter of the canal, amounting to the development of the tendinous fibers. In case a thicker strip is desired it is taken from the outer flap, the lower end of which terminates in the fibers of the external pillar of the ring. The operation is completed according to the choice of the operator, these fibrous strips being used as suture material for a running stitch. The first stitch is so applied as to give the desired lumen to the new external abdominal ring, using the one terminating in the internal pillar for the first suture, the remaining one for the superficial layer and buried sutures. With these strips of tissue a running stitch is made; the little fibrous ends are tied with a piece of silk, which is used to handle them and draw them through. A fine catgut stitch is passed through the tissue at the point where it emerges, and is then passed once or twice around it and incorporated in the knot. The silk is removed, leaving only catgut in the wound. McArthur believes that by incorporating white, inelastic fibrous suture material recurrence is prevented more certainly. He has had no recurrence thus far, and has done nearly one hundred operations according to this method. He had an opportunity to examine microscopically the scar removed from a patient dying of a gangrenous appendicitis one and a half years after the operation, and the living fascicle tissue could be traced distinctly in the scar tissue. Some of the advantages of the method are that it substitutes the removal of foreign material introduced in the wound; lessens the danger of sepsis, affords greater resistance to a future hernia through the incorporation of the unyielding white fibrous tissue; makes local convalescence more smooth, as there is less oozing and infiltration, less febrile reaction; that at least equally good results are obtainable, and that the ten minutes necessary to the preparation of the strips does not greatly increase the risk.

66.—See abstract in THE JOURNAL, xlii, p. 1661.

67. Chronic Myocarditis.—Butterfield discusses the pathology, etiology, physical signs and symptoms, prognosis and treatment, of chronic myocarditis, especially the variety occurring in elderly people. The treatment should include rest, diet, exercise, active and passive, in suitable cases; freedom from care, and the judicious use of remedial agents. The disease ought to be detected early if any results are expected from treatment. The author offers nothing new.

Medical Age, Detroit.
July 25.

68 Renal Decapsulation; Indications, Limitations and Technic. E. E. Kisle.
69 *Notable Advances in Ocular Therapeutics. Henry H. Hotlel.

69. Advances in Ocular Therapeutics.—Hotlel points out those medicaments which are of especial importance, and which are adjudged of service in making easier and more effectual the treatment of ocular disorders. Adrenalin has been found valuable in many conditions involving congestion and exudation such as conjunctivitis, keratitis, scleritis, iritis, choroiditis and trachoma. In ocular traumatisms with pain, laceration and extravasation it renders early and material relief. Nitrate of silver, as utilized in the Credé method for combating ophthalmia neonatorum, has enjoyed general acceptance, but in some cases produced considerable irritation. Other preparations are argyol, protargol, argen nate, argonin, itrol, largin, actol and elarin. Organic silver preparations are serviceable in suppurative conjunctival inflammations, phlyctenular states, purulent dacryocystitis, gonorrheal ophthalmia and ophthalmia neonatorum. Holocain, eucain and nirvanin have been used as substitutes for cocain. As substitutes for atropin have been mentioned, cocaydrin, scopolamin, homatropin and ophthalmin hydrochlorate. The latter is recommended mainly on account of its brevity of action, absence of untoward effects and minim disturbance of accommodation. Aspirin, a salicylic synthetic, is useful as a specific antirheumatic in rheumatic and gonorrheal eye affections because of the positive diagnostic it causes. Copper sulphate is being superseded by argyol, a combination of copper with nucleinic acid, and which, while possessing all the therapeutic efficacy of the sulphate, eliminates almost entirely the objectionable features. It is of distinct service in chronic conjunctivitis with associated alterations of the mucous membrane after the characteric disease. A 10 per cent. solution of argyol produces either no pain at all or very slight pain, and causes very little irritation.

Southern Practitioner, Nashville.
July.

69 Tuberculosis Cured, with Report of Cases. J. T. Hamer.
69 Hypnotism—Is It Rational or Cause Rational with Attendants. J. M. Wood.
67 *La Grippe and Its Complications. A. J. Stevens.
68 Irregular Menstruation and Treatment. R. C. Wylie.

68. Menstruation Group.—Steven discusses the subject and reports nine cases. He emphasizes the importance of antitoxin used early and in large doses, for by so doing there will be little need for the performance of an intubation or a tracheotomy. All cases having some involvement of the larynx should be examined carefully with the laryngoscope, thus establishing the diagnosis beyond question.

67. La Grippe.—Stevens reviews the subject of la grippe, with special reference to the complications of the disease, but offers nothing new.

Louisville Monthly Journal of Medicine and Surgery.
July.

69 Things of Surprising and of This Society that Make for Good. Wm. H. Wathen.
70 Therapeutic Urethral Stricture. Fritz Abell.
71 Surgical Treatment of Ulcer of the Stomach and Duodenum. Geo. Ben.
72 *Of What Value Is Blood Examination to the Surgeon? Thomas L. Bates.
73 Minor Ailments. Lindley Ireland.
74 Clinical Lecture on Pelvic Surgery. Charles C. Miller.

72. Value of Blood Examination in Surgery.—Bates makes a plea for blood examination, not only in surgery, but in all branches of medicine.

Journal of Advanced Therapeutics, New York.
July.

75 Electricity in the Treatment of Chronic Deafness. George E. Cassidy.
76 A Year's Work in Electrotherapeutics. L. V. Austin Hastey.
77 *The Relation of Mechanical Vibration to the Nervous System. Samuel Sexton.
78 *Practical Methods as Adjuvants in the Treatment of Tuberculosis. J. D. Gibson.

77. Mechanical Vibration.—The range of application of mechanical vibration to therapeutics says Sexton, is far greater than is appreciated by the profession, but it has its particular field of usefulness as well as its limitations. By removing exudations, extravasations, transudations, and stimulating the circulatory and lymphatic systems, by exciting in chemical changes by influencing heat elimination and production, by its physical and metabolic effects as well as its reflex action through the nerve stimulation of the cerebrospinal and sympathetic systems, it can be readily appreciated that the diseases to which it is not applicable may be enumerated more easily than those in which its use is indicated. In combination with static electricity, hydrotherapy, phototherapy, thermotherapy, and most valuable of all, properly selected and graded exercises—passive, active, resistive, or resistive—it can cure for many conditions far more ably than older methods of treatment. The following forms of vibratory treatment are recognizable: 1. Interrupted vibration—an interrupted vibra-

tory impulse communicated to the body without pressure in the form of superficial interrupted vibration or deep interrupted vibration of which compression is a feature. 2. Stroking a superficial vibratory impulse applied with motion over a part, no pressure being exerted. It is generally applied against the venous flow, but may be applied otherwise in respect to direction as indications warrant. 3. Friction—deep vibratory impulse applied with motion, varying degrees of pressure being used, the subdivisions according to direction being centripetal, centrifugal and circular. 4. Rolling—a backward and forward movement of a part over underlying structures. It is a form of kneading. Speed, stroke and pressure are important factors to be considered in connection with mechanical vibration. To increase or lessen speed with a given stroke will increase or lessen penetration and affect the quality of vibration. An increase or lessening of stroke with a given speed increases or lessens penetration and affects diffusion. Pressure always increases penetration and diffusion. If too great pressure is used, nausea, weariness, or pain may result. Vibration has a marked effect on respiration, digestion, absorption, heat production, excretion, excretion, the nervous system, the muscular system, and all physiologic processes affected by active change. This being the case, it is necessary that the anatomic relations, the physiologic function, the blood, nerve and lymph supply of each organ or part of the body to thoroughly understood.

78. Tuberculosis.—Gibson emphasizes the importance of intensifying Nature's methods in the cure of pulmonary tuberculosis by the use of such agents as electricity, vibration massage, superheated dry air, the arc-light bath and the inhalations of ozone, which latter can be generated in great quantities by means of electric sparks, but care must be taken not to allow the patient to inhale too much ozone at the beginning as the effects are very unpleasant. Of 140 cases of pulmonary tuberculosis treated by means of the *x*-ray, without a change of climate, 20 per cent. recovered, 70 per cent. were improved, and 10 per cent. were not benefited.

Journal of the Michigan State Medical Society, Detroit.

July.

79 Hints We Yet Lacquod How Potent for Cure Are the Natural Forces? A. E. Colling.
80 A Message from the Children to the Laboratory Worker. Henry Leffmann.
81 *Prevention and Treatment of Puerperal Infection. J. G. Lynds.

81. Puerperal Infections.—Lynds summarizes his paper as follows:

To Prevent Sepsis.—Keep the patient in confinement in the best state of general health possible; observe surgical cleanliness during labor and the convalescence; repair lacerations likely to become infected; leave the uterus free from accumulations and clots; sterilize every infection.

To Treat Sepsis.—Prevent absorption of more infectious material; destroy the germs in the system and eliminate the toxins; support the vitality of the patient and increase the power of the body cells to resist germ invasion in every way possible; control temperature by sponge baths and ice bags; evacuate collections of pus.

International Journal of Surgery, New York.

July.

82 *Contribution to the Study of the Operative Cure of Gastric Ulcer, with Report of a Case. C. W. Stroebell.
83 Sepsis; Its Clinical Aspect and Treatment. (To be continued.) J. Bennett Morrison.
84 The Surgical Assistant. (To be continued.) Walter M. Brickner.

82. Operative Cure of Gastric Ulcer.—A case of this kind is reported by Stroebell, which yielded to treatment. He insists that the purely medical treatment of gastric ulcer should be persisted in until hematemesis occurs, which is in 50 per cent. of all cases, or until progressive disturbances of nutrition result in emaciation and exhaustion, when it becomes strictly operative; of course, perforative cases always are operative. On the occurrence of hemorrhage, at any stage of the case, and in any degree, the proper treatment is surgical, and delay is useless as well as dangerous. He inclines to the belief that the benefits occuring from the use of silver nitrate are due to its well-known beneficent effect on mucous membranes in general; that it acts by relieving the irritability of the hypersensitive zones of the gastric mucosa surrounding the irritating ulcer; and that, therefore, the therapeutic effect is due not so much to its action on the lesion as on the effect of the lesion. He contends that the pathologic condition is not progressive, as in syphilis, but that the lesion is limited to the primarily devascularized area and that after the digestion and absorption of this area, the lesion either heals quickly and spontaneously, or enters on its chronic career. Medicinal treatment merely gives relief from gastric symptoms and vastly lessens the suffering.

Southern California Practitioner, Los Angeles.

June.

85 Retroversion of the Uterus—Its Correction. J. De Barth Shorb.
86 Diagnosis and Treatment of Hernia. F. J. Wilson.
87 *Surgical Treatment of Cancer of the Pylorus. Andrew H. Lobingier.
88 *Puerperal Eclampsia. T. H. Hastie.
89 Use of Bromoform in Pertussis. Mary W. J. Dennis.
90 Vaccination. Edward V. Adams.

87. Surgical Treatment of Cancer of the Pylorus.—Lobingier emphasizes the importance of early diagnosis and operative interference in cancer of the pylorus. If a diagnosis by accepted methods of medical analysis is impossible, the surgeon has a right to expect the internist to ask for an exploratory incision and visual inspection of the stomach. In the hands of the surgeon qualified to do gastric surgery, the exploratory operation has practically no mortality; many a life might be prolonged greatly by its skillful and intelligent performance. It should not be forgotten that ulcer of the stomach may be the starting point of malignant disease.

88. Puerperal Eclampsia.—Hastie reviews the subject and lays special stress on the use of normal salt solution, either per rectum or subcutaneous injection. He thinks veratrum viride is worthy of a trial in suitable cases, but should be used in heroic doses, 10 to 20 minims of the tincture, repeated within an hour, until the pulse rate is reduced. Venesection, when resorted to, should always be followed by the free use of normal salt solution.

New Orleans Medical and Surgical Journal.

July.

91 *Malarial Cystitis. Robert Westphal.

91. Malarial Cystitis.—Westphal reports a case of cystitis in which the presence of the malarial parasite in the blood vessels of the bladder walls was the exciting cause of the disease. The symptoms were typical of an acute attack of cystitis, but the patient did not give a history of malaria. An examination of the urine showed a great many leucocytes, staphylococci and red blood corpuscles, and in many of the latter active malarial parasites. In a stained specimen of the urinary sediment at least half of the erythrocytes were found to be infected. The case yielded promptly to quinin.

Journal of Medicine and Science, Portland, Maine.

June.

92 *Case of Consumption by Bleeding the Patient with Subcutaneous Injections of Oil and Its Detection by the White Globules of the Blood. Thomas H. Eaton.

92.—This article has appeared elsewhere. See THE JOURNAL, xiii, page 107, p. 1896.

Bulletin of the American Academy of Medicine, Easton, Pa.

June.

93 *The Doctor's Duty to the State. John B. Roberts.
93.—Ibid., July 2, 1898, p. 77.

Medical Standard, Chicago.

July.

94 Appendicostomies and Its Treatment. Heinrich Stern.
95 Differential Diagnosis between Hysteria and Hypochondria, and Treatment. L. Harrison Metiler.
96 Surgical Chats. M. Sura.
97 Treatment of Pneumonia. Charles J. Whalen.

New York State Journal of Medicine, New York.

July.

98 Business Side of the Professions from the Standpoint of the Country Practitioner. F. W. St. John.
99 Treatment of Pneumonia. Delavan Bunnell.
100 Pneumonia; Diagnosis and Treatment. F. W. Crosswell.
101 Pneumonia; Its Causes and Treatment. J. H. Raymond.
102 Report of Case of Acute Dilated Stomach and Pulmonary Embolism. Gunn E. Hill.
103 Appendicitis; Indications for Appendectomy. F. H. Lenke.

107 Obstetrics of the Future. G. W. Kosmak.
108 Report of a Case of Encephalocele. John Green.

Toledo Medical and Surgical Reporter.

July.

109 Bright's Disease. C. H. Hazlett.
110 Pemphigus. H. D. Fisher.
111 Treatment of Tetanus. L. A. Levison.

Fort Wayne Medical Journal-Magazine.

June.

112 Stereoscopics and Stereoscopic Attachment. Robert Hanton.

Nashville Journal of Medicine and Surgery.

May.

113 Diagnosis. P. F. Fyfe.

Clinical Review, Chicago.

July.

114 Surgical Clinic. W. H. Wheeler.
115 Treatment of the Insane in Private Practice. L. L. Skelton.
116 Treatment of Chronic Ulcers by Venous Anastomosis. S. B. Ward Stevens.
117 Multiple Neuritis. L. Stanton Hedley.

Journal of the Kansas Medical Society, Lawrence.

July.

118 Value of the Exact Determination of Blood Pressure in General Practice. C. P. Bard.

Canadian Journal of Medicine and Surgery, Toronto.

July.

119 Acute Bronchitis. H. J. Smith.

Canada Lancet, Toronto.

July.

120 Thoughts on Cancer. Wm. Shapton.
121 Address: Surgery—Therapeutical Surgery, Cancer. James Grant.
122 Dr. Oliver Wendell Holmes, Physician and Man of Letters. S. E. Moffett.
123 Case of Abdominal Pregnancy in Eighth Gestation, and Fetus Weighing Three Pounds Removed from Abscess in the Fever. Neil J. Macleod.

Medical Times, N. Y.

July.

124 Imperial Undertaking for Territory At or Near the Bellingham Bay Boundary. C. C. Miller.
125 Cooperation on Even and Trusted by the General Practitioner. W. H. Park.
126 Vaccination of Children in Disease. M. McCreary.
127 Syphilis, Pulse Relative to Murmurs. J. Mackenzie.
128 Errors of Refractivity in Children. J. E. Frost.

American Practitioner and News, Louisville.

June 25.

129 Hysteria, with Report of Cases. John H. Hinkston.
130 Pneumo. G. A. Kennedy.
131 Symptoms in Diphtheria. R. L. Brown.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and briefs of new drugs and artificial foods are excluded unless of exceptional general interest.

British Medical Journal, London.

July 9.

1 *Preventing of Ventral Hernia as a Sequel to Abdominal Section. R. Harrison Allen.
2 The Medical Cure of Hernia. Rhys Gethin.
3 Surgical Aid and Hernia. Wallace Gilbert.
4 Report on the Anatomy of the Insane and Diseased Brains, and the Conclusions to be Drawn Therefrom. J. S. Bolton and Wm. Wallace.
5 Closure of Stoma and a Method of Administering It. Norman Tanner.
6 Modifications of Sherman's Saline for the Treatment of Certain Fractures of the Extremities. T. Crisp.

1. Prevention of Ventral Hernia.—Bishop says that the only tissues as to the union of which the surgeon need interfere are the peritoneum, the fascia and the skin. If these are secure, all the rest fall naturally into their own place, and are far better left untouched. The union of the peritoneum offers no difficulty. The rapidity of its union and the powers of absorption permit of the use of fine catgut, which is readily eliminated as soon as its work is done—within forty-eight hours. The union of the skin is equally simple, but the union of the combined tendon of the lateral muscles is by no means such a simple matter. Some material must be used which shall be strong enough to resist not only the natural pull of the three strong muscles attached to this tendon on either side, but any extraordinary strain which may be placed on them by chloroform or other vomiting, by cough, or by movements of the patient. This material must remain strong and firm for a month or six weeks, and probably such material will remain unabsorbed during the life of the patient. Buried sutures are to be avoided, if possible; but if a buried suture must be used, nothing serves so well as plain silver wire, the ends being twisted and pressed flat against the surface of the fascia. The way in which the sutures are placed is of importance, especially when the material used is wire of any kind. But a method which leaves behind foreign material in the living tissues which can not be absorbed, is not ideal, and it would be of advantage if it could be removed at the end of six weeks without reopening the wound. If the figure-of-8 method is used, the wire is introduced through the skin on one side, penetrating the subcutaneous fatty layer in an oblique manner and emerging in the wound just above the fascia. It is then carried to the opposite side, reversed, and made to pierce the fascia of that side from above downward, about a centimeter from its edge. Both layers of fascia have previously been shaved of fat on their inner surface for that distance. Passing beneath this, the needle is carried through the fascia on the original side from below upward at a point the same distance from its edge. The needle is again reversed and carried through the subcutaneous tissue and fat, obliquely upward, to emerge through the skin at a point corresponding to that by which it first entered, but on the opposite side of the wound. By pulling on both ends of the wire in a direction from the wound, the two fascial undersurfaces are brought together and held firmly opposed to one another. The skin edges are then adjusted, a layer of gauze laid over them, and the ends of the wires are brought together over this and twisted together, closing the skin wound and bringing the divided subcutaneous tissue surfaces in contact. When it is required to remove the wire, this is slightly pulled out on one side and divided close to the skin. A steady pull on the other end draws it out. This method is the quickest of all those which permit removal of the foreign material uniting the fascia, but the removal of these wires is sometimes painful. Therefore, Milton's method may be substituted. The special idea of this method is the use of the lock-stitch. Except for the pain which may be caused by its removal, the first method is preferable.

The Lancet, London.

July 9.

7 Cases of Appendicitis. Anthony A. Bowlby.
8 Cases of Appendicitis. Frederick Treves and W. Williams.
9 Remarks on Appendicitis. F. W. Tuxford.
10 Pulmonary Tuberculosis: (1) Preparation of Microscopic Slides for Blood Films, (2) Further Experiments on Inoculation of Animals with Consumptive Sputum. (3) Experiments with Consumptive Urine. (4) Experiments with Consumptive Milk. (5) Inoculation of Animals with Human Tuberculous Affection of the Mouth. A. E. Wright.
11 *Treatment of Congenital Talipes-varus During Early Infancy. Robert Jones.
12 Amendment of Advertising Proposal for the Consolidation Act. Proposition of Chloroform. Alexander D. Waller and J. H. Wells.
13 Note on the Communication of Chlorodyne Vapor in Air Drawn Through a Respirator. Alexander D. Waller and J. H. Wells.
13½ Preliminary Report of Lymph Examination on the Transmission of Phagocytosis of Uterus. Frank H. Taylor.
14 Abstracts of the Week. [illegible] and Accidents Letter.

14. Treatment of Congenital Spinevarum.—The treatment of congenital equinovarus is divided into two main schools by Jones: (1) Those who treat during early infancy, employing various methods, and (2) those who wait until childhood has well advanced and then correct by one of the various major procedures. The author favors the first method. The pain is slight and is inflicted at a time when the memory is undeveloped and impressions are obliterated at once. Simple division of the tendons of the tibial muscles and the flexor longus digitorum, with immediate rectification of the deformity, as far as possible, and subsequent manipulation have sufficed to convert the compound into the simple deformity in an average of thirty days. The immediate division of the tibial tendons spares the infant during the first few months of life manipulation and plaster-of-paris, and, if the division of the tendo achillis is postponed until the varus is completely, and not only in great measure, corrected, Phelps' operation at as tender an age can also be avoided. On a few occasions the author divided the tendo achillis before the varus was completely cor-

rected, and on each occasion the correction of the residual verum was troublesome and tedious.

Journal of Laryngology, Rhinology and Otology, London.

July.

14½ *Recent Physical Researches on the Nature of Vowel Tones in Regard to Their Hearing on Movements of the Tympanic Membrane. Walter Colenbrander.

15 *Removal of the Semicircular Canals in a Case of Unilateral Aural Vertigo. Richard Lake.

16 Brief Note on Testing the Hearing with the Higher Tuning Forks; Derived from Tests Made in a Case of Removal of the Necessal Labyrinth Together with the Membranous Cochlea. Richard Lake.

17 Indications for Operative Procedure in Connection with the Lateral Sinus and Internal Jugular Vein. James E. Nichol.

14½. Vowel Tones.—The nature of vowel tones in regard to their bearing on the movement of the tympanic membrane is discussed by Colenbrander. Vowels are musical tones produced in the larynx, but owe their special quality to the fact that the laryngeal tone assumes by resonance mouth tones, which are added to the laryngeal tone, or they may mask it to such an extent that the laryngeal tone may be entirely heard. The pitch of the mouth tones is variable owing to the possibility of infinitely small changes in the form and capacity of the pharyngeal, oral, nasal and other cavities of the throat and face. This variation is never beyond a certain limit, so that a certain vowel is always recognizable. The vowel being produced by simultaneous sounds of different pitch and intensity, it follows that the tympanic membrane has the power of taking up such vibrations simultaneously, and, since we distinguish the vowels, that the ear has the power of transmitting them so that they are analyzed and recognized by the higher centers. It is possible that the analysis is made first in the internal ear, and that the results affect groups of cells in the higher centers differently. Cases of disease of the internal ear are especially interesting as bearing on the question of an analysis of the compound sound wave taking place there.

15. Removal of Semicircular Canals.—Lake describes a case of unilateral aural vertigo of five years' standing. No cause could be found for the origin of the deafness. The attacks were heralded in by increased tinnitus, which persisted after the sickness and vertigo had ceased. An examination of the ear gave the following results: Accumeter in concha. Voice was heard at two feet. Whisper not heard. Rinne's test with forks C and C' were negative. C. mastoid — 20 secs., C' — 10 secs. Taste with tuning forks 2C, 2C, 1C, C were not heard. C' — 50 secs., C' — 40 secs., C' — 30 secs., C' — 25 secs. An ordinary radical mastoid operation was performed with the exception that the innermost portion of the posterior wall was not removed, but the bony opening in the temporal bone was enlarged, forward, upward and backward. The malleus and incus were removed. The upper and outer surfaces of the external semicircular canal were exposed throughout its whole extent. The antero-external portion was followed forward and inward until the outer surface of the superior canal was brought into view. The whole of this canal was removed by cutting it away with a medium-sized bur, leaving only the upper part of the arch untouched. The posterior canal was burred away entirely. The upper surface of the external canal was cut away with the bur until the anterior half of the membranous canal was exposed. This was then removed with a small bur, the medium-sized opening made into the vestibule, and the crista acoustica was removed as far as was possible. The wound was swabbed out with Lister's strong solution, the external meatus was divided longitudinally through its posterior wall, and the wound packed and closed by the ordinary methods. The patient suffered severely from shock for about an hour. For the next forty-eight hours she lay in a position commonly described as being typical of cerebral irritation. Three months after the operation there had been no return of the vertigo and the patient is enjoying better health than she has for the last few years. Operation is indicated in those cases when it has been established positively by careful examination and treatment that the vertigo can not be controlled, and that the deafness is sufficiently great to admit of no reasonable hope of alleviation. Although the tinnitus in this case remained as bad as ever, the hearing power improved remarkably. The voice, which before operation was heard at two feet, was now heard well at five feet. Bone conduction had improved by five seconds.

Medical Press and Circular, London.

July 6.

18 *Pessaries; Their Uses and Limitations. Arthur E. Giles.

19 *Comparative Advantages of Inorganic and of Organic Iron in the Treatment of Anæmia. William Murrell.

18. The Use of Pessaries.—According to Giles, pessaries should be used (1) to affect a cure in cases where the uterus may be expected to retain its proper position unaided after being held in that position for some time by means of a pessary; (2) as a temporary expedient while waiting for operation, and in retroversion of the gravid uterus; (3) as a palliative measure when operative treatment is impracticable, undesirable or declined by the patient. The indications for the use of the pessary are: (1) Hernia of the vaginal walls (cystocele and rectocele), the rubber ring pessary of the Meyer pattern being the best in most cases; (2) prolapse and procidentia of the uterus—the rubber ring pessary is the best, but if the perineum is deficient, a Napier pessary or other stem pessary should be used; (3) backward displacements of the uterus. In uncomplicated cases the cure may not infrequently be obtained by means of a well-fitted Hodge pessary or one of its modifications. In cases of long standing, it is best to perform a ventrofixation, as the use of the pessary is liable to cause much pain. It is bad practice to introduce any pessary without first correcting the displacement. The hard rubber, vulcanite, celluloid or block tin pessaries are the best. The pessary must be; the patient should be advised to use a plain water or boracic solution douche at intervals. Astringent lotions are to be avoided, because they tend to coagulate the secretions and favor infection. Periodic inspection is essential, in order to judge of the progress of the case and institute any additional measures which may be necessary.

19. Advantages of Inorganic and Organic Iron in Anæmia.—Murrell regards Blaud's pill as inferior to the dried sulphate of iron pill. He treated five cases with exsiccated sulphate of iron, 3 gr. three times a day, and noted the result. There was a daily increase of 100,000 red blood corpuscles and 1 per cent. in hemoglobin value, which may be taken as the inorganic iron standard under favorable circumstances. For experimental purposes he also treated other cases with organic iron preparations, such as that made from spinach growing on ferruginous soil, consisting of a dark green fluid with a pungent aromatic taste. There was a daily increase in the red blood corpuscles of 70,800, while the increase in hemoglobin value was small. Cases treated with a popular blood preparation showed an improvement of 36,000 red blood corpuscles and 1.07 per cent. hemoglobin a day. In his estimation the best organic iron preparation is iron-vitalin, the use of which gave a daily increase in erythrocytes of 167,600 and the hemoglobin percentage 1.36, an improvement in the red blood corpuscles of 30 per cent. over the best inorganic iron treatment, and 25 per cent. improvement with regard to the hemoglobin value. A good organic iron preparation compares favorably with the best of the inorganic salts, apart from the great advantage of being easily assimilated and free from the discomforts which so frequently attend the administration of the astringent forms of the drug.

Glasgow Medical Journal.

July.

20 *Surgical or Traumatic Rheumatism, with a Note on the Use of Corrigan's Button. James Weir.

20. Surgical or Traumatic Rheumatism.—One of the commonest conditions which medical men are called on to treat is what might be termed a rheumatoid affection of some muscle, tendon, or joint, subsequent to an injury. It is not a true rheumatism, for, as a rule, it is quite intractable to treatment by the usual rheumatic remedies. Weir says that the vagaries of the medical mind are never more demonstrable than in the treatment to which these patients are subjected. Of course, treatment directed toward a possible arthritis, rheumatism,

V 4
190

syphilis or tuberculosis is futile, as a rule. There are cases in which a constitutional taint is discoverable as present in a decided degree, and this factor in the etiology is not to be neglected when treatment is exhibited; but, in the majority of cases, the only assignable cause is some injury suffered, it may be, some considerable time previously. Occupation plays no unimportant part in the causation of this perarthritis in those whose calling necessitates the constant and undue use of special parts, such as is seen in the case of canvasers, dressmakers, pianists, etc. Deformity is another predisposing cause. In flatfoot it is not uncommon to have a similar condition about the tarsus and its surrounding structures. A case is reported in full which illustrates the following points in connection with the subject of traumatic rheumatism: 1. The history of a comparatively slight injury, and later the history of periods of enforced rest of one or other wrist, alternating the periods of hyperactivity amounting to overstrain of that wrist which happened to be at the time the less seriously implicated; the occupation, that of a dressmaker, is significant. 2. The history of the illness is typical, the patient drifting from one medical man to another, thence to the public institutions, and finally into the hands of bone-setters and quacks. The non-response of the symptoms to internal medication and to less heroic measures than the actual cautery is very typical. 3. The fact that active movement of the wrist and hand caused considerable suffering, while passive movement was quite free and painless, excluded the wrist joint from being the seat of the lesion, and directed attention to the periarticular structures. 4. The highly successful, almost immediate, result of the treatment by Corrigan's button. In using the button in these cases the cautery is heated to a degree only sufficient to destroy the superficial layer of skin, or to blister it, so that anesthesia is unnecessary. Treatment by means of the actual cautery is the only therapeutic exhibition which has yielded any successful result in the hands of the author.

Presse Médicale, Paris.

21 (I, No. 46.) *Traitement pathogénique de la douleur chez les dyspeptiques (pain in dyspepsia). G. Lyon.
22 *Pseudo-urinary Troubles. F. Bray.—Des faux urinoirs glycosuriques.
23 *Treatment of Appendicitic Abscesses Spreading in the Pelvis. Chaput. From society report.
24 (No. 50.) La congrès colonial. Paris, May 29, 1904.
25 Ce que sont les "hystéroïdes." L. Bonnaud.
26 Un nouvel instillateur pour instruments de chirurgie. F. Wiest (Paris).

21. Treatment of Pain in Dyspepsia.—Lyon emphasizes the importance of the threefold indications in case of gastralgia: First, to treat the causal affection; secondly, to suppress the influences which exaggerate or maintain the pain, independently of the direct cause, and thirdly, to modify the nervous condition, the cause or consequence of the stomach trouble. The second indication is sometimes the only one that has to be met. Drug gastritis is almost the rule in nervous dyspepsias; their stomachs have to run the gauntlet of one course of medicinal treatment after another. Hayem has long insisted on the dangers of much medication for dyspepsia. Sometimes the mere suppression of all drugs will banish the pain. Overexertion, mental or physical, and professional exertions are sometimes the sole causes of dyspepsia, and almost inevitably aggravate or perpetuate it. In regard to the third indication, psychotherapy is the most important weapon at our disposal. When the gastralgia is a psychoneurosis it is the only treatment needed, and in cases of actual gastritis it acts on the functional disturbances which in the majority of cases far overshadow the organic lesion. One of the aims of psychotherapy should be to divert the patient's attention away from his stomach, while inspiring him with the desire to recover and the confidence in a cure. The article concludes with various formulæ for use when drugs are needed.

22. Pseudo-Urinary Troubles.—Bray has been consulted a number of times by patients complaining of a smarting during urination and abnormally frequent desires. The consumption of a urinary affection was disproved by the results of examination and tests, but analysis of the urine revealed the presence of sugar, although there was no other evidences of glycosuria. He warns that this possibility should be borne in mind in such cases, especially in middle-aged patients. The urinary disturbances in these "false urinaries," as he calls them, are not always due to the presence of sugar, as the proportion may be minute, but may be a nervous manifestation such as is frequently encountered in arthritic subjects, a form of albuminuria due to elimination of uric acid, or the urine may become irritating from some other cause. The urinary disturbances are, therefore, important, as they afford a clue to nutritional disturbances which may be aborted by proper treatment.

22. Treatment of Appendicitic Abscess.—Chaput reports 7 cases of appendicitis forming an abscess extending along the pelvis, all cured by operation. In 4 cases he operated by way of the rectum. This does not require general anesthesia; the operation is simple and rapid; the wound is trifling; the drainage is on a downward slope; there is no danger of contamination, and the patients can up in eight to ten days. In the 43 cases thus operated on there has been no mortality. The vaginal route is condemned for women; it exposes to the danger of hemorrhage, but this can be easily controlled with a large natural sponge.

Semaine Médicale, Paris.

27 (XXIV, No. 28.) *Tuberculous ulcerations of bones on dialysis stimulation. G. Lemoine and L. Normand.
28 Angina of appendicitis. F. Lejars.
29 A primary skin carcinoma not developed on cause de la cicatrice. Jeanselme. From society report.
30 *Cerebellum and cerebellar peduncles. Raymond (Ghent). From society report.
31 Traitement du Kakke par des injections intraveineuses de sang (of sugar). Apolant. Abstract.
32 Rapport psychologique de la responsabilité en pratique. Questions de nerveux (of insane). J. A. Marchand. Discussion.

27. Uremic Paralysis.—Marie and Parcaud have described certain old lesions found at the necropsy of uremic subjects which they think explain the predisposition to uremic paralysis. They call them lesions of disintegration, and claim that they are most frequent in the gray nuclei and the internal capsule. Eighteen endowers of persons who had succumbed to uremic manifestations were examined for these lesions. Twelve of the subjects had not exhibited any paralytic symptoms, and in none of these endowers were these lesions to be found, while they were constant in the 6 other endowers, all the subjects having presented paralytic manifestations during life. In this article other clinical and experimental data are cited which confirm the importance of these lesions in the development of paralytic symptoms in the course of uremic frenzy, say cases.

30. Experimental Tuberculosis.—For six years Raymond has been conducting extensive researches on animals inoculated with human tuberculous material. His conclusions are in favor of the assumption that the tubercle bacillus is a parasite which can live either inside or outside of the cells, and is extremely refractory to the toxic action of the humors of the organism, but does not kill the latter by intoxication. The first lesion caused by the bacilli may head within the circulation appears at some point above, and the latter point may head within a third point still further along humors infected, all by way of the blood. The predilection of the tubercle bacilli for the spleen may be because the tubercles in the other parts of the lung heal, and tuberculous processes in the parenchyma of the lung may then work their way outward, leaving pneumonia behind them until heating at the surface of the lung a tuberculous pleurisy may result, or the bacilli may be swept into the general circulation and induce a tuberculous lesion at some remote point, in the bones, serous or skin. His attributes infection to invasion of some sources, but thinks it is still an open question as to whether man becomes infected by eating or breathing.

Berliner klinische Wochenschrift.

33 (XLI, No. 28.) Fixation of Cutaneous Nerve Adhesions. J. Boeckmann (Berlin).—Die Verwachsung der Nervenstämme.
34 Destruction of Tympanic Membrane by Lichtstrahlen. F. Hinsberg.—Über die Zerstörung des Trommelfells durch Lichtstrahlen.
35 *Quincke's Operation for Hydrocephalus. R. Emmerich (Berlin).—Zur Lumbalpunktion.
36 *Test of Motor Gastric Function. H. Strauss (Royal Clinic, Berlin).—Ueber die Prüfung der motorischen Magenfunktion.

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39. Gallagher's Question.—Sherman reports the experiments of Gallagher to determine the value of milk as a food in typhoid fever. Gallagher's original article on the subject was published in THE JOURNAL of July 4, 1903, page 16.

40. Salt of Water Retention of Stomach.—Among the various uses of the water containing salt of fruits and mineral waters, the retention of water by the stomach is probably important. This fact is the determination of the retention in the stomach and later after a test breakfast. In health, the residues in gastric cases from 100 to 300 c.c. A longer stomach they cannot be perceptible evidence of impaired work of the water function. The presence of an abnormal amount of secretion, however, diminishes the amount of the residues even when the water function is entirely normal. The test solution ordinarily used is besides the total amount of stomach content, the total solid content is estimated. This combination has been found a very valuable for prevention on the original tubule, and it enables minor conditions to be detected even in their earliest stages. The solid substance itself is soluble to a point to form a homogeneous solution before the physiological limit is detected. The test breakfast consists of 50 gm. white bread and 400 gm. water. One hour after the solution solution is ejected out (0), and the stomach is washed with 200 c.c. water (0). The Boston-Bennett formula is used: plus the solidity of 0 divided by the solidity of 0 minus the solidity of 0. When this has been determined, the fluids are mixed and passed into two or three graduated cylinders. The amount of sediment after standing twenty-four hours in the tests for the retained test. The blood should be collected before drinking. When the content of sediment is found above known to the total content of stomach content, the examination of water functioning, without essential increase in the function, is justified. Hayem gives the findings in a number of persons of various stomach affections. The total solidity in 11 cases of ulcer stomach ranged from 60 to 91, the total residues from 90 to 200 c.c., the amount of solid residues from 20 to 67 c.c. In a case of gastric ulcer the total solidity was 65, the total residues 300 c.c., and the solid residues 170 c.c. In a case of carcinoma, with motor insufficiency, the total solidity was 67, the total residues was 1000, and the solid residues 120 c.c. In other cases of motor insufficiency, without hypersecretion the total solidity ranged from 40 to 71, the total residues from 300 to 800, the solid residues from 120 to 140 c.c. The findings in these and other cases indicate that hypersecretion develops in most cases on a basis of motor insufficiency, and that a primary hypersecretion is rare apart from motor disturbances.

41. Disappearance of Stomach.—Hertz's test of solubility of the stomach resulted negatively, and subsequent laparotomy failed to affect on the secretion and motor functions of the organ. On the other hand, the antiseptic combined an unmistakable salutary action. The solubility of the gelatin was the more remarkable, as the motor insufficiency of the stomach persisted unmodified. He applied gelatin by oral intake alternately with bismuth subnitrate 100 times on 10 subjects, each test lasting 24 hours solution, and applied in the empty stomach. The enlargement tests were made 40 times.

42. Agglutination of Typhoid Bacilli in Biliary Affections.—Schneider obtained slightly results in the agglutination tests in 24 per cent. of 25 cases of icterus or liver affections. One of the subjects with chronic nephritis showed agglutination at 1/75, the two others at 1/50. With these exceptions, all the tests were negative.

43. Physiologic Action of Bilirubin.—Widmayerth failed to detect any definite action of bilirubin on isolated parts of the lung prepared by some writers. The blood hardly alters the oxygen-carrying power of erythrocytes when they absorb the full extent of bilirubin or combines of conjugated bilirubin. Bilirubin showed unaltered catalytic of fats. He therefore to conclude this, assuming that the writer obtained the extract of bilirubin to catalytic interest in the tissues. The catalytic therefore, presented more rapidly at first, but the catalysis caught up with it in time, and the final outcome was the same for both portions.

44. Treatment of Mineral Milker Deposits.—The prophylaxis from Kempf's clinic practices that mineral deposits should aim to prevent, restrict and obtain retention in the tissues. The aim is accomplished in a certain extent by the dietetic measures adapted to the varying insufficiency of the kidneys. The conditions are more complex that in diabetes, for the retention of salt is an important element. Treatment in diabetes with a tendency to dropsy should be carefully watched in regard to the intake of salt, and even without the tendency, attention should be directed to the retention of salt as a measure to the full balance of the body. In cases of a particularly compensated contracted kidney, retention of salt seldom occurs, and can be prevented by avoiding highly salted foods. If the particularly severe cases the amount of chloride is a guide to selection of the kidney functions. As the normal proportion of salt in the urine is about .5 per cent., the subject can safely ingest as many half grams of salt daily as he excretes hundredth of c.c. of urine. For instance, when the daily urine amounts to 1,000 c.c. he can ingest ten half grams of salt with impunity. The intake of water should also be regulated. When an insufficient amount of water is taken by a nephritic subject with a tendency to dropsy, the elimination of the solid constituents of the urine is not promoted, their retention is favored, with the retention of water is favored, and then the hydremia and hydrops are exaggerated. The objective here is likewise the dietetic. Retention of 1,000 c.c. of urine by a nephritic with a tendency to dropsy corresponds to an intake of 1,000 c.c. of water. Reduction of the intake of water favors the dropsy. When the water-excreting power of the kidneys is exhausted—that is, in well-compensated cases of contracted kidney—no toxins are circulating in the blood which can be supplied by increased diuresis, and the constituents are not absorbed by such tasks or skin which it is necessary to wash out by this means. Consequently, the indications for increased diuresis are subordinate in these cases. The further indication—to wash out more of the solid constituents of the urine—is not realizable by increasing the diuresis—at least it has no control in the writers' experience. Hence, we must not expect any favorable effect from a copious intake of water in the cases of well-compensated, chronic interstitial nephritis. It is even liable to prove directly injurious. Rational restriction of the intake of fluids in the latter plan, the cases up in certain cases of heart disease. Regulation of the intake of nitrogen, salt and water thus becomes the most important means at our command in influencing chronic kidney affections of this kind. An exclusive milk diet supplies too much fluid for the proper action of solution. A strict regulation that is correctly practicable for any length of time. The components of the diet should be quantitatively regulated to meet the varying functional capacity of the kidneys. When retention is once established, dietetic measures alone are unable to influence it, and diaphoretic measures should be prescribed. Experiments in the clinic have demonstrated that preventive procedures are able to favor the elimination of considerable amounts of solid substances in the sweat, the average being about 10 to 20 per cent. of kidney elimination, and in some cases as much as 60 per cent. The diaphoresis does not cause more solid substances to be eliminated through the kidneys, but it induces a vicarious elimination in the event of both water and urea and chief components, which has a very beneficial effect in cases of retention with a tendency to dropsy. The solid substances are eliminated as freely as the water. Experiments have demonstrated that the chlorin content of the blood will be found less concentrated than in cases before diaphoresis. The chlorin content of the urine is likewise increased. Diaphoresis is, therefore, the principle means for contracted kidney with pronounced retention of water and

V 43
1904

hydrops, and the urines would contain it to these cases, but in such would test it freely, refraining from an increased intake of water at the same time, as this would annul its effects. In regard to antiseptic, their results were less definite, but they think that it deserves more attention as a means of vicarious elimination in dropsical kidney affections, the patients in good condition. When none of these measures prove effectual, drugs have to be used. All the diuretics act by stimulating the kidneys, and these only should be used which cause the elimination of solid substances as well as of water. Elimination of the latter alone brings danger of uræmia. This question deserves further study. The writers report research on a healthy subject, various diuretics being given at intervals for seventy days. The amount of urine excreted rose under the influence of caffein, diuretin and uropherin, but the elimination of substances in solution in the urine did not increase in proportion to the increase of fluid. Both time the freezing point was lower. The chlorids were washed out most freely; the output of other molecules was scarcely increased at all. The same limit in cases of compensated contracted kidney produced an opposite result. The fluid was not increased so much, the chlorids still less, and the chlorin-free molecules much more. The diseased kidneys respond less to the stimulus than a healthy organ. In severe cases, with pronounced retention of water and urinary solid substances, copious diuresis may be a life-saving measure, but it can be anticipated in response to drugs only when the resorbing and functional powers of the kidneys have not fallen below a certain minimum. In one such case, under the influence of diuretin the elimination of chlorin-free molecules was increased by 67 per cent., while the concentration of the blood returned nearly to its normal figure. In the severer cases all our measures are powerless, dietetic treatment is impossible, stimulation of the vicarious emunctories gives inadequate results, the diseased kidneys are unable to respond to medication, and we are reduced to merely symptomatic treatment. Our aim should be to ward off this severe stage, and this can be accomplished by preventing and combating retention.

Deutsche medicinische Wochenschrift, Berlin and Leipsic.

44 (XXIX, No. 23.) Ueber die Bedeutung der Lungen-Infusionen für die Diagnose und Therapie der Lungen-Tuberkulose. F. Jacob (Berlin). (Continued.)

45 Ueber das arzneiliche Wesen von Val-Sinestra und über seine Wirkung auf den Stoffwechsel (study of Val-Sinestra water). M. Kaufer.

46 Fall eines seuchen Tumors mit riesenhafter gewaltiger Schrumpfniere (contracted kidney). C. Lange.

47 Dangers of Gas Bath Heaters. Hamm.—Die Gefahren des Gasbades.

48 Patents of Interest to Physicians. Schottin (Berlin).—Patentamtliche Neuheiten.

44. Direct Infusion of the Lungs for Diagnosis and Treatment.—Jacob is the physician in charge of the first university medical clinic at Berlin, and he has been studying the question as to whether medicinal substances can be safely injected directly into the bronchi, below the fork, and the effects produced. He describes extensive experimental research, the principal results of which are that five cows tolerated for months direct injections into the lung of various substances without the slightest apparent inconvenience, confirming the results obtained in smaller animals. Of all the substances tested, Koch's old tuberculin proved to have the greatest therapeutic effect. Next in efficacy came creosote, betol and methylene blue. The results of the tests all corroborated the peculiar efficacy of tuberculin from the bactericidal as well as the therapeutic standpoint. They also established the harmlessness of direct infusion of a fluid into the lungs and its especial advantages in treatment. Tuberculous bronchopneumonic cavities in the cows treated by infusion of tuberculin and creosote became encapsulated more perfectly than is ever observed in cattle under other circumstances. The tuberculin and the creosote were used in the strength of .1 per cent. The most striking results were obtained in the emaciated cow No. 2. During the five months' course, 39 infusions were made of 500 c.c. each, using first a .1 per cent. and gradually increasing to .4 per cent. solution of tuberculin. The total amount of tuberculin thus introduced into the lungs was 78 gm. After each infusion there was pronounced dyspnœa, and the temperature rapidly rose, but these symptoms all subsided in the course of one, or at most two days. The cow's appetite remained good throughout, and the lung cavities healed over. The fluid was slowly infused through a special elastic catheter, about a yard long, introduced into a main bronchus through a tracheotomy opening, the infusion complete in a few minutes. It was never found necessary to fasten the cows. An attendant merely held the head, drawing it up to expose the wound. During the infusion the animals bawled more or less, and afterward coughed for a few minutes, but then proceeded to eat with apparent enjoyment, and no evidence of dyspnœa, except the very sick animal, No. 2. The article is continued to include the clinical experiences.

Deutsches Archiv f. klinische Medicin, Leipsic.
Last entered XLIV, page 288.

49 (LIVXX, Nos. 1-2.) Die Hautdrüse Tuberkulin-Reaktion und ihr Verhältniss zur parenchymatösen Tuberkulose. E. Lesser. (Continued.)

50 Zur Lehre vom Ascorbin der Harn-Sediment-Präparate (about Ascorbin, they found, another name for Uroxanthin). Pfeiffer.

51 Ueber operative Behandlung der Hydrocephalus. E. Hildebrand (Berlin).

52 *Ueber die Ausscheidung des Jodkaliums durch die Nieren. Gerhardt (Leipsic). (Experimental (rabbit in the ear). 27 cases (Gerhardt, Jaffé, Ortner, Rosenbach, Schlesinger, Schultzen, Strauss, Wolff).

53 Die Hautdrüse und Glycosurie. (Ueber Hautdrüse und Glycosurie). E. Lesser.

54 *Ueber Hyper-Leukocytose beim Abdominal-Typhus und anderen Krankheiten. Kast und Gätig (Prague).

55 *Influence of Alcohol on Cerebro-Spinal Fluid. L. Finkelnburg (Bonn).—Experimentelle Untersuchungen über den Einfluss des Alkohols auf den Hirn-Rückenmarkskanal.

56 *Das Verhalten der Nervenzellen bei Vergiftungen und Infektionskrankheiten (Tumors in spinal cord). von Leyden.

57 Changes in Spleen in Pernicious Anæmia, etc. G. Hayem (Paris).—Veränderungen der Milz bei perniciöser Anämie und anderen schweren Krankheiten.

58 Ueber die Giftigkeit des Fleisch-Extracten und Seiner Verwandten. Meissner (Marburg).

52. Differential Diagnosis of Tophi in the External Ear.—Ebstein describes two cases in which lumps were noted in the auricle of the ear, in subjects evidently predisposed to rheumatism or gout. He supposed at first that they were tophi, but conclusion from his study of the cases that such lumps should not be accepted as tophi until the discovery of the presence of uratos in them. In the absence of uratos, they can not be classed as tophi.

54. Hyperleucocytosis in Typhoid and Other Diseases.—Kast and Gätig found leucopœsis a corroborative sign in 92.4 per cent. of 103 cases of typhoid examined for the purpose at Prague. Even in the cases with severe complications, such as pneumonia, icterus, multiple abscesses and sore throat, the sign was positive in 80 per cent. of all cases. Under 7,000 is accepted as pronounced leucopœsis, but up to 12,000 is regarded as still dubious. Leucopœsis is extremely valuable for the early diagnosis of typhoid, in connection with other signs of the disease. It may be apparent, actual or absolute, according to the circumstances. Leucocytosis over 12,000 renders the assumption of typhoid very improbable, especially the alternations of very high and very low leucocyte count which are noted in sepsis and severe pneumonia. The leucopœsis of anæmia simulates that of typhoid, as also paratyphoid, according to Gätig's experience.

55. Influence of Alcohol on Pressure of Cerebrospinal Fluid.—Finkelnburg remarks that if we are allowed to apply to man the results of experimental research, we have every reason to assume that alcohol has a marked effect in increasing the pressure of the cerebrospinal fluid, in addition to its toxic action on the nerve substance. We have also reason to assume a secretion-promoting action when the paralyzing effect of the alcohol on the ganglion cells of the cortex is dying away, and the signs of increased cerebrospinal pressure then predominate in the clinical picture.

56. Differential Diagnosis of Spinal Tumors.—Minister discusses the differentiation of tumors within and outside the spinal cord. The course of true spinal cord tumors is irregular, in consequence of the various inflammatory processes and hemorrhages induced by the growth of the tumor. On the other hand, an extramedullary tumor proceeds through a regular series of phases after the first protracted stage of the unilateral root pains, which may occur as an isolated symptom for months and years before other symptoms develop. The limit of a neuralgic phase at the beginning suggests the probability of an intramedullary location, although not absolutely pathogno-

muscle. A painless course speaks in favor of a tumor of the cord, after exclusion of gliosis. Tumors originating in the cord may induce a circumscribed painfulness of the spine which is also noted with tumors originating in the membranes, especially the extradural ones. When the tumor is intradural this is not observed to such an extent. Pointed kyphosis suggests a bone affection, tuberculous caries or a carcinoma of the spine. On the other hand, rounded kyphosis is observed and kyphoscoliosis may be noted with either an extramedullary or intramedullary lesion, especially in cases of gliosis. The dissociated sensory paralyses are important signs for the location of the tumor, especially in gliosis, and to a certain extent in meningeal and vertebral tumors. Paralysis is observed more with extramedullary, and especially with extradural tumors than in cases of tumors of the cord. The root symptoms, and often the first cord symptoms, may be restricted to one side in cases of extramedullary, especially of meningeal tumors, and the Brown-Séquard one-side lesion may be observed. Dissociated anesthesia, an expression of an affection of the posterior horn, is usually homolateral, generally in the arm. If it is the result of compression, it is usually due to compression of the lateral columns and develops in the crossed leg. The sequence of the appearance of the symptoms has great differential value. The bone symptoms, for instance, when they are the first to appear, speak for the assumption of a process in the bone.

Mittheilungen a. d. Grenzgebieten der Med. u. Chir., Jena.

Last indexed XLII, page 320.

39 (XIII, No. 2.) °Glandular Metastasis in Case of Gastric Cancer.—Renner (Breslau).—Die Lymphdrüsenmetastasen beim Magencarcinom.

40 Bar Exostosis due Bothriocephalus Latus.—H. Miyake.

41 °Bar Exostosis due osteo. Mycotic Infection. Ibid.

42 Ueber einen neuen anaeroben pathogenen Bacillus. Beitrag zur Aetiology der akuten Osteomyelitis.—D. Wyss.

43 Fall von Tuberculose des Wurmfortsatzes (of appendix). M. Bahr.

44 °Ueber Fettphthitis mit bes. Berücksichtigung der Leukocytose. II. Purgative eitrige Peritonitis (circumscribed suppurative peritonitis).—A. Pedersen (Berlin).

45 Experimentelle Beiträge zur Nieren-Dekapsulation (of kidney).—O. Eberhardt (Königsberg).

39. Glandular Metastases in Case of Gastric Cancer.—Renner is convinced from study of 302 glands in 15 cadavers, that metastasis in the glands occurs by embolism in case of cancer of the stomach. He found the various groups of glands involved in from 33 to 60 per cent. of the cases, with occasionally metastasis in same liver gland. He advocates removal of all accessible ones in operating. The consistency and size are no criteria, as enlarged glands may be intact, while small, soft ones may be cancerous. Six of the cadavers examined had not been operated on. He gives a diagram to show the involvement of the various groups of glands, each square representing one gland. The glands in the lesser curvature were by far the most frequently involved. Out of 51 suprapancreatic glands examined, 49 per cent. were found cancerous. This darkens the prognosis of a gastric cancer when the glands on the pancreas behave suspiciously under palpation. About 175 of the 302 glands were free from cancer, and 127, or 42 per cent., were involved.

41. Mycotic Infections.—Miyake regards this affection as a septic pyemia, and has established that it has no specific agent, but may be caused by the ordinary cocci or the typhoid or colon bacilli. The striated muscles are alone attacked. He found that staphylococci from a panaritium, injected into a vein, induced a suppurative inflammation in a muscle predisposed by electric overstimulation, passive congestion or contusion. The staphylococcus is the most frequent agent in man, but the combination of extreme virulence and a predisposition on the part of the muscle from overexertion, trauma or congestion is necessary to induce this primary suppurative myositis. It may be solitary or multiple. It develops with a sudden onset, chill, swelling and painful contracture of the muscle with abscess formation. Miyake reports 33 cases.

44. Appendicitis.—In this part of his monograph Pedersmann reviews the material of circumscribed suppurative peritonitis observed at the Moabit Hospital in Berlin. He proclaims that during the first two to two and a half days simple appendicitis seldom shows a leucocytosis of more than 20,000, while the figure is usually higher in the severer forms. A low leucocyte count, with severe clinical symptoms, indicates general intoxication and paralyzing of the resisting forces. The third to the fifth day, a high leucocyte count and severe symptoms indicate operation at once, but a low leucocyte count with the same shows that surgical intervention might be too dangerous and that it is better to temporize. By the end of the first week, and later, a leucocyte count of 20,000 and over indicates a circumscribed abscess. If the symptoms are serious, operate; if not, wait. As soon as the suppuration ceases, the leucocyte count drops, although the collection of pus may persist indefinitely. The chief value of the enumeration of leucocytes is for diagnosis and prognosis; its import as an indication is trivial.

Münchener medicinische Wochenschrift.

46 (LI, No. 21.) °Ueber Dyskrasie staphylogenetica (Unterstützungs-Bäder") (classification). W. Ritz (Heidelberg).

47 Technic of Agglutination Test. A. Lion (von Leube's clinic, Würzburg).—Die Methoden zur Ausführung der Gruber-Widalschen Reaktion.

48 Ueber Pyemie mit chronischem Verlauf (course). O. Jordan.

49 °Ueber funktionelle Diagnostik mit bes. Berücksichtigung der Pulsusarten des Herzens (of heart). O. Rosenbach (Berlin).

70 °Zur chirurgischen Behandlung und Histologie der Röntgen-Ulcera. G. Haudenschild and P. Lineau.

71 Ueber Regenerat bei Colliculus Cuneiti (cauterization of crust of ulcer).—Dreyer.

72 °Statistics Derived from Inquiries at Public Vaccination Stations. M. Haba.—Statistik auf ärztlichen Impfstationen.

73 Infant Feeding in Munich and Infant Mortality. A. Groth.—Die praktischen Ausdehnung der natürlichen und künstlichen Ernährung in München und ihr Einfluss auf die Säuglingssterblichkeit.

74 Action of Roentgen Rays on Internal Organs. F. Krenz.—Die Wirkung der X Strahlen auf innere Organe.

75 Further Progress in Endoscopy. F. Desenner and B. Wiener.

76 Ueber Stein cutis diutenus. H. Köbner.

77 (No. 22.) °Direct Registration of Heart Sounds. O. Frank (Munich).—Die unmittelbare Registrirung der Herztöne.

78 °Ueber Colitis ulcerativa. K. Vogel.

79 °Action of Salicylates on Urinary Apparatus. E. Knecht.—Wirkung des Natrium salicylicum auf den Harnapparat.

80 Results in 250 Consecutive Operations for Inguinal Hernia. F. Franckel (Nuremberg).—Erfolge der Leistenbruchoperation nach der Bassinischen Methode.

81 Exaggerated Fear of Potassium Chlorate. Bürt (Basle).—Die übertriebene Furcht vor Kali chloricum.

82 Ein komprimirbarer Reihehalter (leg holder). O. T. Lindenthal.

83 Must Every Recent Laceration of Perineum Be Sutured at Once? K. Hegar.—Muss jeder frische Dammriss genäht werden?

84 Wilhelm Ritz. Nekrolog.

85 Medico-historical Art Achievements in Germany. R. Holländer.—Ueber deutsche medico-historische Kunstleistungen.

86 (No. 23.) °Ueber die lokale und allgemeine Wirkung der Röntgenstrahlen (action of Roentgen rays). G. Beermann and P. Lineau.

87 °Zur Behandlung von Hautkrankheiten mit Röntgenstrahlen (röld in cutaneous affections). J. Müller (Wiesbaden).

88 Arsenic in Arsenic Addiction. C. Strzyzowski.—Sind unsere Arsenpillen Lunker arsenfrei?

89 °Preservation of Aluminum Acetate. Werner.—Haltbarmachung von Liquor aluminis acetici.

90 °Ueber eine neue diagnostische und therapeutische Wert der Lumbalpunktion bei der Meningitis. T. Werthember.

91 °Die psychiatrischen Aufgaben des praktischen Arzts (psychiatric tasks of general practitioner). A. Schott.

92 Eine Krückstorung beim Anlegen des Jaquetschen Sphygmographen (improved technic). O. Rotmeyer.

93 Eine neue Unterschenkelschiene (leg splint). R. Fuchs.

94 °Licht-Therapie nach Professor von Tappeiner (phototherapy). Jesionek. (Commenced in No. 22.)

95 Report of the Damage Suit.—Homöopathie und Kurpfuscher. See page 1155.

46. Intermittent Limping.—Ritz's article was reviewed in an editorial on page 200. He has encountered the typical syndrome of what he calls dyskrasia angiosclerotica in 30 out of 45 cases. In one instance a trauma was responsible for the arteriosclerosis of the leg and foot, entailing the syndrome. Symptomatic treatment improves and may arrest the affection, but no brilliant therapeutic results have been attained to date.

49. Functional Diagnosis of the Heart.—Rosenbach warns that the basing of a diagnosis on a single symptom is liable to entail many errors. Especially is this the case with the heart. If a halt is not made we will soon find that every third person is labeled as having heart disease, and the fact that nothing is easier than to cure the dilatation of the heart observed so frequently will before long be the eighth wonder of the world.

70. Surgical Treatment of Roentgen Ulcerations.—This communication from Meisner's clinic relates that a number of cases of severe Röntgen ulcerations were rapidly cured by transplantation of pedunculated flaps. No other procedure had any effect. The flaps rapidly healed in place, the pains subsided and the general health was invariably benefited. The trouble

is unmistakably the result of the injury of the vessels by the rays. They are injured beyond the possibility of repair, but the supplying of normal vessels in the flaps transforms, as it were, the Röntgen surface, and healing then proceeds rapidly. In one case this occurred, although the flap itself became necrotic and was replaced by Thiersch flaps, previously used.

72. Statistics Gathered at Vaccinations.—Hahn suggests that immensely valuable information might be obtained by inquiries of the parents when infants are brought to be vaccinated. The physician nowhere else encounters such a wealth of material in healthy children, and statistics gathered by medical students at the public vaccination stations would solve many of the problems in regard to infant feeding, etc.

77. Direct Registration of Heart Sounds, Etc.—Frank has invented an apparatus for registration of the heart and other faint organic sounds. The movements of a membrane set in motion by the sounds are photographically recorded on a sensitized film automatically unrolling behind a narrow slit. The membrane of the drum is connected by means of a tube with a phonendoscope or funnel over the heart. To magnify the record of the movements of the membrane a small mirror is connected with it, mounted on a rubber rod, the whole resembling the parts and relations of the membrana tympani and the malleus.

78. Surgical Treatment of Ulcerative Colitis.—Vogel reports from Bier's clinic 2 cases of this affection successfully treated by making an artificial opening into the intestine to allow cleansing and local treatment of the parts. Boas published a similar case more than a year ago. The artificial anus should be made as far toward the periphery as possible, and the opening should be large enough to allow ample therapeutic intervention. Vogel found a suspension of bismuth or iodoform very useful for local treatment, allowing the drug to settle on the intestinal walls before withdrawing the fluid. It can be rinsed away after a few hours' action. He attributes the ulcerative colitis in one case—by exclusion—to primary erosions of the mucosa with eventual lesions of the solitary follicles. Months are required for this course of treatment, but by the end of the year the patients were all cured. As a measure to prevent the development of strictures he inserted a rubber tube from the natural to the artificial anus from time to time.

79. Action of Sodium Salicylate on Urinary Apparatus.—Knecht tabulates the findings in patients with rheumatism or sciatica, treated with sodium salicylate. In only 7 out of the total 40 were any symptoms noted indicating irritation of the urinary apparatus, and they were minimal in all but 2—the latter passing isolated tube casts, the others showing merely traces of albumin in the urine.

83. Action of Roentgen Rays.—Research at Neisser's clinic corroborates the assumption that the blood vessels are the tissues that suffer from the action of the Röntgen rays. The destruction of the cells is followed by absorption of the toxic products, which explains the general action observed.

87. Roentgen Rays in Treatment of Cutaneous Affections.—Müller reports 3 cases of pruritus, 2 of hyperhidrosis and 2 of chronic eczema of the hands, all cured by Röntgen treatment, after long resistance to other measures.

89. Preservation of Aluminum Acetate.—Vörner has found that the addition of a small amount of boric acid not only preserves the solution of aluminum acetate but enhances its therapeutic action while preventing smarting. He uses it in a proportion of .25 parts boric acid to 100 parts solution of aluminum acetate, diluting to 1/10 for compresses, or 3.5 parts boric acid, otherwise the same. For dressings he uses 100 parts of the acetate solution with a saturated solution of boric acid to make 1,000 parts.

90. Lumbar Puncture in Meningitis.—Wertheimber proclaims that lumbar puncture has restored the prognosis of meningitis in children to a certain extent. It is particularly valuable in the meningitis that follows pneumonia or any other acute infectious disease, when we have reason for assuming the presence of a non-bacterial, serous meningitis. The puncture should be repeated not only to evacuate the cerebrospinal exc when exploratory puncture discloses a high pressure, but also whenever there are general symptoms, especially eye findings, which indicate pressure on the brain. By so doing we may sometimes succeed in saving an otherwise doomed child and also restore the already impaired brain functions, the sight in particular. In one of the cases reported he made 14 punctures between June 17 and August 5, withdrawing from 20 to 80 c.c. each time until the last, when only 5 c.c. escaped.

91. Psychiatry in General Practice.—Among the points emphasized by Schott are that it is impossible to treat the patient properly at home, and that the facial expression and the manner of expression are important for the diagnosis—if possible have the patient write out his experiences himself. In making the prognosis err, if at all, on the side of an unfavorable outcome. The general practitioner should refrain from certifying in respect to sanity or insanity. His task is to draw a picture of the case as he knows it, refraining from prejudice as to this or that psychosis, and merely noting the facts in the case, retaining the patient's confidence and avoiding the stigma of denouncing him as mentally irresponsible—this should be left to the skilled psychiatrist.

94. Phototherapy According to Tappeiner.—This communication from Pennelt's clinic at Munich gives the details of a number of cases of cancerous and other growths treated by painting the surface with a 1 per cent. solution of eosin to enhance the action of phototherapy.

Therapie der Gegenwart, Berlin.

*Last indexed page 220.

96 (XIV, No. 6.) *Zur Behandlung des operativen inoperablen Uterus-Carcinoms. A. Martin (Greifswald).

97 Ueber das Hogenbin (Apocynin-Glucosid). P. Rasgall and R. Focken. Ibid., M. Siebenin (von Lorden's clinic).

98 Regular Efficacy of Thoroughly-dried, Pulverized Digitalis Leaves. Focke (Duesseldorf).—Ueber den gleichmässigen Wirkungswert von gut pulverisierten und gut aufbewahrten Digitalisblätter Pulver.

99 Einige Worte über Gelenktuberculosen (recurrent of joints). E. Weiss (Pistyan).

100 *Die Behandlung der Cholera infantum mit bes. Berücksichtigung der therapeutischen Technik. H. Hecker (Berlin).

101 *Chronic Tuberculosis of Glands, Suspicions of Latent Tuberculosis. Fürst (Berlin).—Chron. Lymphdrüsen-Intumescenzen, verdächtig als latente Tuberkuloseberde.

102 Mercury in Certain Forms of Liver Disease. O. Rosenbach (Berlin).—Quecksilber als Heilmittel bei gewissen Formen der Lebererkrankung nebst Bemerkungen über die Diagnose der Lues ex juvantibus.

96. Treatment of Inoperable Uterine Cancer.—Martin remarks on the increasing proportion of operable cases of uterine cancer which we now encounter, Mackenrodt even reaching the proportion of 94 per cent. Zweifel has never observed a case of cancer in a patient whom he had previously treated for a gynecologic affection, but Lomer has had a case in which he was able to detect the incipient phase of a cancer and watch its development. Martin has observed 2 such cases. One was in a woman of 36, a year after a benign adenoma of the corpus had been removed. She was a ii-para, with rachitic pelvis requiring instrumental delivery of the second, very large child. The ninth day the lochia showed traces of blood and a nodule as large as a bean was found to have grown in the cervix. High amputation of the collum was done in two weeks, but the patient succumbed the seventh week after delivery with diffuse carcinoma metastases over her entire body. The other patient was a woman of 42 with extensive erosions of the portio. They were excised and showed no trace of cancer. She returned about a year later with a cauliflower cancer at the spot, and was treated by total extirpation. She died eleven months later, four months after the first symptoms of metastasis had been noted. In all of Martin's experience he has never encountered but a single instance of spontaneous recovery from a cancer. This was in a woman of 40 whose vagina and collum were the crater of scirrhus. The disturbances were slight, and she refused an operation. Her physician gave her sandarac, and reported recently that she was still alive after twenty-two years, and did not require treatment of any kind. Martin has also encountered 3 other instances in which the disturbances were so slight that the elderly patients here

them without trouble and succumbed years afterward to senile exhaustion of the vital forces. His father, so long ago as 1871, called attention to the frequency of cancer of the uterus in women who had married again after having been infected with syphilis by their first husband, who had succumbed to some syphilitic brain affection. The frequency of this sequence in his experience was so striking that he made it a rule to advise such widows against remarriage. Two who followed this advice are free from cancer to date. Martin's observation has been that cancer in young, full-blooded women runs a more rapid course than in others, and that a pregnancy has a most baneful effect on it. No benefit was derived in his inoperable cases from any of the drugs recommended for general or local treatment nor from electrolysis. He prefers to excoriate and pack the crater with gauze impregnated with solution of ferric chlorid, leaving it in place for four to six days. The surface granulates, and after four or five days it is irrigated with dilute tincture of iodin, after which it skins over. As a rule, the crater heals completely and the patients are rejuvenated. The fetid secretions, hemorrhages and pains are arrested by this procedure, and the moral effect on the patient is a great gain. When symptoms of recurrence appear, he repeats the cauterization and the cauterization as long as it is possible to avoid injury of other organs in so doing. Later than this he uses antiseptics to deodorize, and narcotics to relieve the pain, with alcohol to delude the patients.

100. Treatment of Cholera Infantum.—Rosier describes the method of treatment adopted by Baginsky, who insists that this disease requires ceaseless observation of the clinical manifestations, sensorium, temper, attitude of the body, behavior of pulse and of diuresis, and adaptation of the therapeutics to the varying conditions, with a certain executive skill in the measures deemed necessary and their systematic application. The great and immediate danger is from the loss of fluids, felt specially in the functioning of the organs which are thus stranded, as it were, from loss of their accustomed medium. The body may lose one-tenth to one-fifth of its weight in the diarrhea of a single day in this disease. The symptoms observed resemble in many respects those of uremia, and are due to the lack of fluids and the consequent retention of toxins in the body. The diarrhea carries away much of the causal agents and this may be supplemented by calomel and castor oil. A mustard bath is a sovereign means of stimulating the vasomotors and heart from the periphery. The infant is kept in the bath from five to eight minutes—the water colored a turbid, yellowish green by a couple of handfuls of mustard. It is well to give the mustard bath in the morning instead of the ordinary bath, and repeat it during the day if needed, carefully protecting against drafts to ward off otitis media. Camphor should be injected before the bath and again every three hours in urgent cases until danger of collapse is past. Injections of artificial serum restore the loss of fluid, and a hypotonic saline solution should be preferred, as it is more rapidly absorbed and as salt is more or less contraindicated by the nephritis generally present—a half a teaspoonful of salt to a quart of boiled water. The amount should be about 20 to 30 c.c. per kilo, and the injection repeated, if necessary, twice a day. It is supplemented by mineral waters. The practitioner must not be misled by the apparent mildness of the attack and postpone these measures until the opportune moment has passed. When vomiting continues, notwithstanding abstention from food, lavage of the stomach is called for, and in many cases after lavage 50 to 100 c.c. of the above salt solution is poured into the stomach and left to quiet the thirst, or it can be injected into the rectum. Albumin seems to be the most harmful food in cholera infantum; its nourishing value is far outweighed by the danger from its putrefaction. Strict asepsis should be insured, both for the infant and for the nurse, in every measure undertaken.

101. Retrograd Glands as Foci of Latent Tuberculosis.—Pfuhl declares that the lymph system is too often neglected in combating infections. The circulation through the lymphatics should be promoted in every way. He gives effervescent cod liver oil, iodin and syrup internally, but places most dependence on iodin externally, applied in a 6 per cent. solution in fluid vaseline. This combination does not irritate the skin and has no odor of ammonia. He paints the suspicious glands twice a day, or has the mixture gently rubbed into them after softening with wet cotton. He supplements this by giving five to ten drops of the iodized vaseline in cocoa three times a day. Treatment should be kept up for six to nine months, commenced while the glands are still reparable. The children emerge from such a course in blooming health.

Zeitschrift f. Krebsforschung, Jena.

Last indexed XLII, page 599.

100 (I, No. 4.) Healing Processes in Epithelioma. J. Orth.—Other Investigations on Epithelioma, under title: Experimentelle Untersuchungen.

104 Transplantable Lymphosarcoma des Hundes (of the dog). A. Bashor (Frankfurt a. M.).

105 Zur Kenntniss des primären Horn-Krebses der Lunge (cancer). E. Wenzel.

102. Healing Processes in Epitheliomata.—One of the cases described by Orth was published recently by Schwarz in *Virchow's Archiv*, a papilloma which had developed on a basis of atheroma. It displayed traces of destruction of the epithelial elements by a kind of calcifying process—evidently a tendency to spontaneous healing. The growth had developed rapidly, first noted only three months before, and there has been no evidence of recurrence. In two other cases the calcified epitheliomata were malignant growths, developing on the basis of a chronic bone lesion, with fistula. The calcification was not so pronounced as the accompanying horn formation, some of the "horn pearls" being directly surrounded by a connective tissue stroma. The giant cells in these tumors were "foreign-body giant cells," thus suggesting an explanation for the formation of connective tissue.

104. Transplantable Lymphosarcomata.—For the last two years the Institute for Exp. Therapy at Frankfurt has been experimenting with inoculation of cancer material. None of the experiments with human material was successful, and but few of those with animal material. But a spontaneous lymphosarcoma on the penis of a dog was successfully transplanted into the fifth generation, the positive results numbering 31. The dogs with positive results proved to be nearly all immune to later inoculations. Bacteriologic examination of the tumors was always negative. Photogravures of some of the findings are appended.

Books Received.

Acknowledgment of all books received will be made in this column and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

A Reference Handbook of the Medical Sciences, Embracing the Entire Range of Scientific and Practical Medicine and Allied Science. By Various Writers. A New Edition, Completely Revised and Rewritten. Edited by Albert H. Buck, M.D. New York City. Volume VIII. Illustrated by Chromolithographs and 488 Half-tone and Wood Engravings. Cloth. Pp. 704. Price, $7.50 per volume. New York: Wm. Wood & Co. 1904.

The Examination of Waters and Water Supplies. By John C. Thresh, D.Sc. (Lond.), M.D. (Vic.), D.P.H. (Camb.), Honorary Diplomate in Public Health, Royal College of Physicians and Surgeons, Ireland. Cloth. Pp. 650. Price, $6.50. Philadelphia: P. Blakiston's Son & Co. 1904.

A Text-Book of Human Physiology. By Albert P. Brubaker, A.B., M.D., Professor of Physiology and Hygiene in the Jefferson Medical College. With Colored Plates and 344 Illustrations. Cloth. Pp. 688. Price, $4.00 net. Philadelphia: P. Blakiston's Son & Co. 1904.

The Doctor's Leisure Hour. Facts and Fancies of Interest to the Doctor and His Patient. Charles Wells Moulton. General Edition. Arranged by Porter Davies, M.D. Cloth. Pp. 382. Price, $1.50. Chicago, Akron, New York: The Saalfield Publishing Co. 1904.

The Treatment of Some Acute Visceral Inflammations, and Other Papers. By David B. Lees, M.A., M.D. Cantab., F.R.C.P. Lond., Formerly Scholar of Trinity College, Cantab. Pp. 350. Price, $1.50. Philadelphia: P. Blakiston's Son & Co. 1904.

Physician Versus Bacteriologist. By Prof. Dr. O. Rosenbach of Berlin. Authorized Translation from the German by Dr. Addison Brown. Pp. 402. Price, $1.50 net. New York and London: Funk & Wagnalls Co. 1904.

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